Children with Cerebral Palsy – Sleep Factsheet

Common sleep problems in children with additional needs
Every child is different and every sleep problem is unique. Many children with additional needs will experience a sleep problem during childhood as discussed in our factsheet “Sleep- Children with Additional Needs”.

Cerebral Palsy
“Cerebral palsy is a condition that often affects muscle control and movement. It's usually caused by an injury to the brain before, during or after birth. Children with cerebral palsy have difficulties in controlling muscles and movements as they grow and develop.” (1)

There are many factors that can affect sleep associated with cerebral palsy. As the condition affects every child differently some may experience only a few symptoms, while others may have many.

- Muscle spasms
- Pain
- Movement difficulties (decreased tone or increased tone)
- Epilepsy
- Visual impairment
- Hearing impairment
- Brainstem dysfunction
- Gastro-esophageal reflux
- Reduced/increased tone to palate, adenoid/tonsils causing sleep apnea

There are a number of studies which have identified that there are a significant number of children with cerebral palsy (CP) who have sleep problems. The results suggest that from 19-40% of children with CP will have or have had a sleep problem. (2)
The commonest problems relating to sleep reported included:

- Settling to sleep
- Sleep onset difficulties
- Night waking
- Sleep disordered breathing

**Support and Management**

It is often difficult to know what methods and strategies will be the most effective when resolving sleep difficulties in children who have additional and complex needs. Many of the commonly used techniques will be very effective for any child regardless of disabilities. Sometimes the techniques need to be adapted so that the messages are delivered in a way which the child with additional needs will respond to.

**Bedtime routines**

It is really important to get a good bedtime routine in place as early as possible. This will support the child going to sleep now and in the future. Putting together a routine that is tailor made to meet the child’s physical, sensory, learning, communication, understanding needs is imperative in getting the best night’s sleep. Using a combination of the above ideas and a structured routine will help. Dealing with sleep problems using behavioural techniques have also been found to be successful.

Setting a good bedtime routine is a common and well evidence sleep technique to aid sleep onset and resolve bedtime battles. However, this may be problematic to implement if the child has difficulty with communication and understanding. Therefore using other cues to help reinforce routine such as using touch, verbal, sound and visual inputs may be other ways to help the child understand what is expected of them.

**Visual Timetables**

Using a visual timetable can help reinforce new routines. Verbal communication aided with a visual cue will strengthen the child’s understanding. These are particularly helpful for supporting a good bedtime routine. It allows the child to see what is about to happen. There are many online support templates for visual cards and timetables.

Here is an example:

This is a collection of different types of pictures explaining a simple bedtime routine. BATH- BRUSH TEETH- PYJAMAS ON-INTO BED-STORY-THEN TO SLEEP.
It is best to keep the timetable simple and meaningful for the child, using symbols or pictures they can recognise and relate to.

**Timers and clocks**
Timers and clocks are very effective in supporting the timing of activities and helping a child to prepare for transition to the next activity. These are both visual and audio cues to help communicate clear messages. There are clocks available which represent daytime (awake) and night time (sleep). These simple visual messages can be used, even if the child does not understand “time” concept.

**Light and Dark**
As with everyone the circadian rhythm is partially governed by light and dark. It is important to reinforce the light/dark and wake-sleep cycle. Reduce light and any light emitting devices at least 45 minutes before bedtime will help melatonin production (the sleepy hormone).

If the child is nervous about complete darkness using a small nightlight or lava lamp in a safe place may help give them some light, but also a calming focal point when going to sleep.

For children who have visual impairment, using other sensory inputs to strengthen the circadian rhythm can be used: See fact sheet on Visual impairment

**Massage**
Using touch and massage can be hugely beneficial for tight muscles. Your child’s physiotherapist and occupational Therapist can often advice on massage techniques which can help both relax the muscles but also the body and brain in preparation for sleep.

**Complex Needs**
Some children with complex CP may find sleep difficult because they have a number of medical conditions which impact on sleep. These children may need additional support as well as using more commons behavioural strategies alongside.
Most children with physical disabilities will have a team of professionals supporting and advising management of the symptoms.

To work out the best sleep solutions often a multi-professional approach is needed. Firstly, a good assessment of the sleep problem is needed to plan appropriate intervention and management. For children with very complex needs; sleep studies may be required, these can include polysomnography or actigraphy. This can often be time consuming before a plan is put in place to resolve issues.

Sometimes with particularly complex cases a more medical approach alongside a good sleep plan may be needed. This may involve:

- Medication to reduce high muscle tone and spasms.
- Melatonin to support the onset of sleep has been shown to be effective, particularly if the child has visual impairment.
- Specialist sleeping positioning aides.
- Specialist beds and mattresses for optimum sleeping position and sleeping environment to ensure the most comfortable sleep.
- Pain management – This can include using massage, medicine and/or good sleeping positioning.
- Sometime particular medical intervention may be needed at night to support or monitor breathing problems.

(4,5)

If you have any concerns about your child with additional needs and their sleep then contact your local Child Development Team and ask to talk to the Specialist Health Visitor.

References
1. Scope; What is cerebral palsy?; Scope information; 2016
2. Newman et al; Evidence for sleep problems; Developmental medicine and child neurology; 2006; 48; 564-568
4. Newman CJ, O’Regan M, Hensey O: Sleep disorders in children with cerebral palsy; Developmental medicine and child neurology; 48 (7); 2006; 564-568