Children with Downs Syndrome – 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”.

Sleep and Children with Downs Syndrome
Around 50% of children with downs syndrome experience sleep problems. (1)

The common physical features of downs syndrome babies such as flatter face, short neck, poor muscle tone can increase the risk of sleep problems occurring.

One research study showed that in children with downs syndrome aged 7-14 years:

43% had trouble settling at bedtime
51% woke during the night
28% slept next to a parent
38% wet the bed (3)

Other common problems identified include: reluctance to go to bed, mouth breathing, loud snoring, restlessness, teeth grinding, sleep walking and night talking.(4)

Sleep disordered breathing
Many children with Downs Syndrome experience some degree of sleep disordered breathing. The National Downs Syndrome Society quotes that there is “50-100% incidence of sleep apnoea in individuals with Downs Syndrome.”

The American academy of paediatrics suggested that all children with downs syndrome should have a sleep study or basic polysomnography. It was felt that often sleep apnoea goes undetected in
children with downs syndrome. (5) The most common symptom of sleep disordered breathing is snoring.

The causes of sleep disordered breathing in children with downs syndrome is largely factored by the low muscle tone, small chin and often enlarged tongue. In a recent study the prevalence of sleep disordered breathing in children with downs syndrome was 54.6%. (2) It was concluded that this was largely due to the low muscle tone. Many children with downs syndrome also have a greater risk of developing enlarged tonsils and adenoids.

Treatment and support
To combat and resolve sleep problems in children with Downs syndrome, a clear understanding of the cause of the problem is important. If it is a behavioural issue, such as poor bedtime routine, normal behaviour approaches can be effective. If it is a problem related to the child’s anatomy, then sleep studies may be need to ascertain the severity of the problem. Removal of tonsils and adenoids has been very effective in resolving sleep disordered breathing. For some children and adults with sleep apnoea and downs syndrome, using sleep/breathing support overnight may be required.

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.

Setting a good bedtime routine is a common and well evidenced sleep technique to aid sleep onset and resolve bedtime battles. Use other cues to help reinforce routine such as using touch and visual aids, these will help the child understand what is expected of them.

Verbal messages
Using clear verbal messages will be important in structuring the bedtime routine and preparing the child for what is about to happen. Giving time warnings will help structure the evening. For example: saying “five minutes before bath-time” and using a timer to support the concept of now and next.

Visual Timetables
Using a visual timetable can help reinforce new routines. Verbal communication aided with a visual cue will strengthen the child’s understanding and what is expected. 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 templets for visual cards and timetables. Here is an example using a variety of pictures to illustrate what is available. It is always best to use similar types of symbols or pictures rather than a mixture as below:

These demonstrate a timeline for a simple bedtime routine.
BATH- BRUSH TEETH- PYJAMAS ON-INTO BED-STORY-THEN TO SLEEP.

Use pictures which your child will understand, recognise and be able to relate to. The timetable should be simple and meaningful for the child. To help you put together a bedtime time line, talk to your speech and language therapist or specialist health visiting team.

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 visual cues to help with communication. Even if a child is unable to tell the time, there are many variations now available which will help children to know when it is time to be in bed and time to be awake. Below is one example of a clock, which changes from a star on a blue background to a yellow sun.

![Clock Image]

Light and Dark
As with everyone the circadian rhythm is partially governed by light and dark. Children with downs syndrome may be sensitive to light or dark. It is important to bear this in mind when using any light emitting devices such as computers and tablets. They may require longer reduced exposure to light devices to aid melatonin production (the sleepy hormone produced to aid sleep onset). They may also be very anxious in total darkness. Therefore having a small nightlight or lava lamp in a safe place may give them some light, but also a focal point when going to sleep.

Sensory calming activities
Some children with downs syndrome may also have sensory processing difficulties and are either very sensitive or sensory seekers. There are a number of activities that can help calm and relax a child in preparation for bed. Often these may need to be trialed first to see if they are effective. For example; using pressure or deep massage before bed has shown to be very effective. Some children like to roll on a large gym ball, again using pressure. Some children may find these activities too stimulating before bed and would have the opposite effect.

Massage and touch
Using touch and massage can be hugely beneficial for letting children know that it is time to relax and go to sleep. This can be part of the bedtime routine. Touch used in a certain way can give the same message as a verbal one would. For example: After completing the bedtime routine and tucking your child into bed, giving them a kiss on the forehead just before you leave the room. This can reinforce the verbal messages "I love you, night night"
Further information:

www.downs-syndrome.org.uk

References:

5. National downs syndrome society