

## SLEEP AND SENSORY PROCESSING



### How Does Sensory Integration Impact Sleep?

**Sleep** is an important part of our everyday lives. Our bodies need sleep in order to stay healthy, think, move, interact, and feel our best. For many people it is difficult to fall asleep, stay asleep, or be comfortable while they are trying to sleep; 30% of children have trouble with sleep (Vasak, Williamson, Garden, & Zwicker, 2015).

One reason for these difficulties may be related to the way their bodies experience and react to the world around them. Stimuli (such as, sights, sounds, touch) may make it difficult for some children to make their bodies calm and relaxed. Researchers have discovered that there is a significant link between sleep behaviours/patterns and the way bodies experience sensory stimuli or sensations. In particular, research has found that children who are sensitive to sights, touch, movement, and sound have greater difficulty with sleep (Engel-Yeger & Shochat, 2012; Shochat, Tzischinsky, & Engel-Yeger, 2009). Parenting styles, cultural values, sibling interaction, family stress, sleep deprivation, napping, sleeping position, medical illness, sleep disorders, psychiatric disorders, and behavioral/developmental difficulties also impact sleep (Vasak, Williamson, Garden, & Zwicker, 2015). Children with **sensory integration (SI)** needs are more likely to have challenges falling asleep, staying asleep, and/or being comfortable while sleeping. Poor sleep not only negatively impacts the child, but the whole family.

## Does My Child Have Sleep Challenges? A Checklist

The **BEARS** acronym is a very helpful way to check in about your child's sleep:

**B**edtime: Does your child have difficulty falling asleep or going to bed by himself/herself?

**E**xcessive daytime sleepiness: Does your child have difficulty waking up or seem groggy or sleepy throughout the day?

**A**wakenings at night: Does your child wake up at night? Can he/she fall back to sleep by his/herself?

**R**egularity: What is your child's typical bedtime and wake-up routine?

**S**nororing: Does child snore or stop breathing, gasp, or choke during sleep? (Owens & Mindell, 2005)

A "yes" to **B**edtime, **E**xcessive daytime sleepiness, **A**wakenings at night, and/or **S**nororing questions can indicate a sleeping challenge. If your answer for **R**egularity indicates that your child does not have a consistent bedtime and/or wake-up routine, that can also indicate a sleeping challenge. Some of these sleeping challenges may be related to sensory processing difficulties. Keep in mind that **snoring** can be due to many different reasons (impacted tonsils or adenoids; a condition such as sleep apnea or asthma). If your child snores, you should see your GP for help.

### Common Sleep Problems in Children

While there are many different reasons a child has trouble sleeping the two main problems parents encounter with their children's sleeping habits are that their child cannot fall asleep and/or that in order to get their child to sleep they must co-sleep with a parent.

#### Trouble Falling Asleep

Children can have trouble falling asleep for many different reasons including but not limited to, the environment that your child is in, the sleep clothes your child is wearing, the activities done that lead up to bedtime, and your child's habits around falling asleep.

## **Co-Sleeping**

Many parents find that the only way they can get their child to sleep is by either having the child sleep in their bed or room, having a parent sleep in the child's bed or room, or allowing their child to come into their bedroom in the middle of the night when they wake up. If co-sleeping is absolutely necessary:

- Have your child sleep in a sleeping bag or on a portable mattress on the floor of your room instead of directly in the bed with you.
- If the child prefers you sleep in their bed, transition to sleeping on the floor instead.
- Having a bed in an infant's room instead of the infant's bed in your room will make it easier for the parent to move rather than the baby- giving the infant a more restful sleep.

The end goal is to eventually **transition** your child so that they are able to fall asleep in a reasonable amount of time and stay asleep in their own bed independently.

## **Sleep Interventions**

To change sleep patterns, new routines and habits must be formed around bedtime, as well as during the time leading up to bed. The environment in which the child sleeps is another important factor to consider. For children with sensory needs, environmental factors around them (for example, bed sheets or pyjamas), can significantly influence their sleep (Miller Kuhaneck & Watling, 2010).

The best routine for your family is one that includes completing the same set of activities around the same time each night.

Sleep issues can be very stressful for families. It's a good idea to be open to as many suggestions and possibilities as possible.

## **Creating and Maintaining Bedtime Routines**

One of the best ways to help support your child's sleep is to create and maintain a bedtime routine (Goldman, Richdale, Clemons & Malow, 2012). Completing a routine before bed is a great way to help the mind and body prepare for sleep. Carrying out a bedtime routine signals the body that it is about to go to bed. It may take some time to figure out what kind of routine works best for you, your family, and most importantly your child.

Experimentation, creativity, and flexibility are important in this process. Once you figure out a plan that works for you and your child, stick to it! Consistency is key!

The bedtime routine, and time for the routine, should be consistent, and should work for all members of the family.

The routine can be simple and short.

## **Getting Ready for Bed: Calming Pre-Bedtime Activities**

It is difficult for most people's bodies to suddenly switch from "daytime mode" to "sleep mode." If you find your child puts off going to sleep or lays in bed waiting for his body to feel ready for sleep, some of the following activities may be beneficial.

Children with Sensory processing difficulties, often demonstrate sensory seeking behaviours around bedtime that can result in over arousal (Miller Kuhaneck & Watling, 2010). It is important to lower the child's arousal state and to calm him or her down to allow the child to fall asleep and stay asleep. Steps can be taken throughout the day that will help to decrease a child's arousal before bedtime.

Active play (heavy muscle work - jumping, climbing, rough and tumble, wall push up's, trampoline) for at least 30-45 minutes before the start of a bedtime routine can help with regulation

The following activities focus on decreasing bothersome or alerting stimuli (sights, sounds, etc.) and increasing calming stimuli/sensations:

- Avoid bright screens (TV, computer, phone, Ipad) for at least 2 hours before bedtime routine.
- Relax in a dim, quiet space before heading to bed
- Choose a relaxing activity, like reading, colouring, drawing, jigsaw puzzle, word/number games (Sudoku, crossword, word search), cards,
- Listen to quiet music that is soothing to your child.
- Wrap body in a favourite blanket or sit under a weighted blanket before bed time (at least 20 minutes duration).
- Take a warm bath
- Meditate or do light yoga exercises (Moovlee, on you tube for younger children offers lots of short clips for you and your child to follow).

You tube has a lot of suitable mediation and/or yoga activities for children and young people to follow.



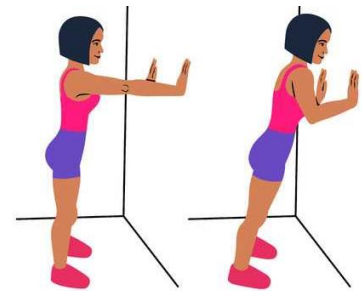
- Getting a tight hug from a family member, or roll an exercise ball, gently, but firmly, over your child's back whilst they lie on their tummy on a mat.



- Rhythmic motion, such as gently rock in a rocking chair, can be soothing.

- Deep breathing or sucking may help the body feel more calm and ready for sleep; for example, blow up a balloon several times, drink room temperature water through a straw, or suck on a sugarless mint.

- Heavy work activities may be helpful if your child feels the need to move before going to bed. For example, doing laundry, wall push ups, manipulating clay/putty, or throwing and catching a weighted ball can be calming.



- Allow for plenty of movement opportunities throughout the day for the child. For example, running, jumping, and swinging.

## **Changing the Sleep Environment**

The environment plays an important role in how the body feels, responds, and completes activities throughout the day. Bedtime and sleep are no exception, especially for children with sensory sensitivities, to visual, auditory, tactile sensory input.

The following list provides some suggestions for creating an environment for sleep that may help your child fall asleep faster, stay asleep for longer, and experience sleep more comfortably:

• **Colour:** Paint your child's room a colour that he/she finds soothing. (common colours are **pastel** shades of green, blue, lavender, taupe, grey).



**Avoid** high contrasts of colour, busy wallpaper, bedding, carpets or rugs as this can lead to **sensory overload, visually.**

• **Lighting:** Choose full colour spectrum light bulbs, not fluorescent or spiral bulbs (too warm or yellow, too cold and blue white can lead to anxiety). Consider use of dimmer switches for a transition from day to night. Hang room darkening shades/curtains if light bothers your child. Choose cordless window coverings for safety.

• **Limit stimulation:** Crowded and messy bedrooms can be highly disruptive to sleep patterns. A chaotic room can lead to visual overload, resulting in increasing anxiety.

Keep toys, clothes etc in a covered box, cupboard, wardrobe to avoid visual clutter.



• **Acoustics** (sound): To limit the noise bouncing around the bedroom, the use of natural wood floors may be useful, with plain rug(s).

Use of wooden blinds, soft light shades are preferable to “noisy” metal or plastic blinds.

- Play/listen to a soft, soothing noise (if noises are not bothersome or distracting), such as: music, sound machine, fan, air purifier.
- Sleep under a heavy quilt, comforter, or blanket – the deep pressure can be soothing.
- Tuck the sheets under your child’s mattress on one or both sides; this can provide soothing deep pressure.
- Sleep with a body pillow, pet, or stuffed animal in the bed – it can provide deep pressure or a sense of boundaries in a large bed.
- Use 100% cotton or flannel sheets and launder them with short wash cycles to avoid pilling.
- Wash new sheets and pyjamas several times to make the fabric feel softer.
- Put sheets and/or pyjamas in the dryer five minutes before bedtime- the warmth can be soothing for some children.
- Keep the room cool. A decrease in body temperature signals the transition to sleep.

### **Other Considerations**

- Adopted children may need additional emotional supports for sleeping.
- If your child uses a CPAP machine, build the CPAP machine into your bedtime routine.
- Children who have experienced trauma may have individualized needs to feel safe while sleeping (e.g. need a door open or a night light on).

**It is important to make slow changes to the bedtime routine and try each new strategy for 1-2 weeks before giving up. Change is hard so it may be met with initial resistance. Try to get your child involved as much as possible in making decisions, such as, where the night light is going, colour of bed sheets etc**

Adapted from The Spiral Foundation