

**Article Feature:**

**Good Sleep in Babies and Young Children**

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Good sleep is as important as good nutrition for the physical and mental development of your baby and young child. Just as parents actively plan for enrichment classes, they should also actively set aside time for play and time for rest.

**A. Introduction**

**1. Babies and young children spend more time asleep than awake.**

The primary activity of the brain during the early years is sleep. Babies and young children need to have both good quantity (ie. sufficient time) as well as good quality sleep.

**2. Sleep is vital to the optimal physical growth, brain development and overall health of a child.**

Sleep is important for the physical growth, immune system, heart and blood vessels and hormonal function of every child. Sleep is also crucial to the mental development of babies and young children.

Sleep disorders can affect every aspect of a child’s physical, emotional, cognitive and social development. Sleep problems can also exacerbate underlying medical, psychiatric, developmental and psychosocial problems. Sleep problems in children can also have a significant impact on the family.

**B. Sleep Patterns: Is Your Baby and Child Getting Enough Sleep?**

Age	Average sleep duration (24 hr)	Sleep patterns
Newborns	16-20 hr total	1 to 4 hr sleep periods followed by 1 to 2 hr awake periods Amount daytime sleep = amount night time sleep
Infants (0-1 yr)	13-15 hr total	Day/night differentiation develops between 6 wk and 3 months Sleeps through the night at 9 months Naps 2-4 hr in 2 naps/day
Toddlers (1-3 yr)	12 hr total	Nap 1.5-3.5 hr in 1 nap/day
Preschool (3-6 yr)	11-12 hr	Napping declines, most stop by age 5 yr

## **C. Sleep Hygiene: Help your Baby and Child to Develop Healthy Sleeping Habits**

Good sleep hygiene is a practice that all parents should adopt from the first day of their baby's life.

### **1. Sleep schedule**

All babies and children should have a consistent and age appropriate sleep-wake schedule. The bedtime and wake time should be at about the same time every day. There should be no more than 1 to 2 hour differences between weekday and weekend bed times and wake times.

An age-appropriate bedtime is an essential component of this schedule. For example, earlier bedtimes are appropriate for babies and young children in response to their need for more sleep. If a young child's bedtime is too late, he/she will often become overtired, resulting in hyperactivity and irritability.

Regular scheduled naps are important for babies and young children. The naps should be geared to the child's age and developmental needs. Avoid very long naps, too many naps or naps in the evening. Contrary to popular belief, skipping or withholding naps in a younger child will not facilitate sleep at bedtime, but can be counter productive and result in the child becoming overtired and having more difficulty falling asleep and staying asleep.

It is important that everyone in the family understands the importance of the baby/child's sleep schedule and adheres to it.

### **2. Bedtime routine**

All babies and children should have a consistent bedtime routine that is short (about 30 minutes) and consists of the same 3 to 4 relaxing activities every night, with the last part occurring in the room where the child sleeps.

## **D. The Significance of Sleep Disorders in Babies and Young Children**

### **1. Sleep problems are common in babies and young children.**

Snoring occurs in more than 25% of Singapore children and obstructive sleep apnoea occurs in 1 to 3% of children.

### **2. Sleep problems in babies and young children are treatable.**

The majority of sleep disorders in children are treatable. These may include medication for narcolepsy, surgery for obstructive sleep apnoea, and behaviour therapy for nightwakings. In addition, the neurobehavioural complications of sleep disorders may be reversed with treatment of the underlying sleep disorder.

### **3. Sleep problems in babies and young children are preventable.**

Many sleep disorders are preventable with parental education on normal sleep and sleep hygiene.

### **4. Sleep problems can affect mental development and learning in babies and young children.**

Sleep disorders such as obstructive sleep apnoea (OSA) in children can cause sleep fragmentation, hypoxaemia (decrease in blood oxygen levels) and hypercapnia (increase in blood carbon dioxide levels).

Snoring in babies is associated with decreased scores on the Mental Development Index when such snoring induces awakenings (sleep fragmentation

Children who always snore have significantly poorer academic performance in mathematics, science and spelling. Children who frequently snore have poorer academic performance in mathematics and spelling.

Pre-schoolers with OSA show normalised sleep and respiratory patterns and improved cognitive scores following treatment.

However, children with lower academic performance in secondary school are more likely to have snored during early childhood and to have required treatment for snoring compared with better performing schoolmates. These findings support the concept that the learning deficit may be only partially reversible and that a "learning debt" may develop with sleep disordered breathing during early childhood and hamper subsequent school performance.

**5. Sleep problems can cause behavioural problems in children.  
Behavioural problems can cause sleep problems in children.**

Hyperactive and inattentive behavior has been reported in children with habitual snoring. Up to one third of all children with frequent, loud snoring or sleep disordered breathing will display significant hyperactivity and inattention. All children with mild symptoms of attention deficit hyperactivity disorder (ADHD) should be screened for snoring and other symptoms of OSA; as children who have undergone treatment for sleep disordered breathing can show significant improvements in hyperactive and inattentive behaviour.

Sleep problems are also common in children with special needs, in particular children with ADHD, autism spectrum disorders and mood/anxiety disorders. The most common sleep problems in children with special needs include night wakings, early morning wakings and shorter total sleep time.

**E. Common sleep problems in babies and young children**

**1. Sleep onset association disorder  
(Why can't my baby sleep through the night?)**

Babies and young children can and should be trained to fall asleep on their own without the need for parental intervention.

Babies who have sleep onset association disorder are unable to fall asleep on their own at bedtime or to self soothe themselves back to sleep during night awakenings without the help of parental intervention. Such babies fall asleep with inappropriate associations such as sucking on a milk bottle to sleep, breastfeeding to sleep or being rocked to sleep. When these babies awaken in the middle of the night, they require the same associations to fall back to sleep.

Babies with sleep onset association disorders can wake and cry multiple times during the night and require the breast or bottle or rocking to fall back to sleep. Such multiple awakenings obviously affect both the baby as well as the parent's sleep quality and can be a source of emotional stress to first time parents.

Behavioural treatment is effective in sleep onset association disorders. The 2 most common approaches used are the standard extinction approach ("crying it out" method) and the graduated extinction approach ("checking" method).

In the standard extinction approach, the baby is allowed to cry to sleep independently in the cot. The time for the baby to cry to sleep can seem an eternity for many grandparents in Singapore, so parents who choose this approach must be firm in their convictions.

In the graduated extinction approach, the parents check on their child at fixed intervals (eg. every 5 minutes) or at progressively increasing intervals (eg. 5 minutes and then 10 minutes).

The goal of both approaches is to enable the baby or child to develop self-soothing skills so that the baby or child can fall asleep independently without negative sleep associations (e.g. feeding, rocking). Both approaches typically take 3 to 7 nights, with the graduated extinction approach taking longer. Once a child learns to fall asleep independently at bedtime, he or she will also be able to fall asleep independently at night awakenings.

## **2. Limit setting sleep disorder (Why doesn't my toddler want to go to sleep?)**

Limit setting sleep disorder typically occurs in toddlers older than the age of 2 years old who are able to walk/run well and speak well. These children test their parents' limits (and patience) by refusing or delaying their bedtimes. Typical requests at lights out time include those that involve play (I want to play with Thomas again!), reading (Can you please read me one more story?), feeding (I need a drink of water) and toileting (I need to pass urine please). Attempts to deny the child his/her request may result in him/her crying or screaming.

In limit setting sleep disorder, it is important for the parent to be firm and consistent in the bedtime routine and bedtime. Giving in will reinforce the delay tactics. The parent needs to demonstrate his/her authority and set the proper limits.

## **3. Obstructive sleep apnoea (Why does my baby or child snore?)**

Snoring is a symptom of airway obstruction during sleep. About 28% of Singapore children snore and 6% of Singapore children habitually snore (ie snore on most nights). This percentage in Singapore children is similar to that from international studies.

Snoring can be a manifestation of a more sinister sleep problem known as obstructive sleep apnoea (OSA). In OSA, there is abnormal breathing during sleep with complete or partial airway obstruction that disrupts normal oxygen and carbon dioxide exchange during sleep and that disrupts normal sleep patterns.

Children who habitually snore should consult a paediatrician specializing in sleep disorders. These children may require an overnight sleep study to assess if they have OSA. Children who have OSA confirmed by an overnight sleep study should receive treatment as soon as possible. Treatment is usually surgical removal of the tonsils and adenoidal tissues.

Untreated OSA in children can result in high blood pressure and heart strain. As mentioned above, OSA can also affect mental development in babies; as well as learning and school performance in children. The learning deficit may be only partially reversible. OSA may be the cause for mild ADHD symptoms and children with mild ADHD should be screened for symptoms of OSA.

## **F. Conclusions**

1. Sleep is important for the physical growth and mental development of children.
2. Sleep problems are common in children but they are usually treatable and preventable.
3. All children should be screened for sleep problems.