



Sleep Toolkit for birth to five years

Guidance and support aimed at parents and carers, and those working with families with babies and young children

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Introduction – the importance of sleep

We all do it – but how much do you know about what happens when we sleep?

Sleep is essential for our bodies - a lack of sleep can be harmful and can cause difficulties with our physical and psychological wellbeing.

Sleep is the way that our bodies process what has happened during the day and recharge our energy. You might think we don't do anything when we are asleep but many parts of our brains are in fact more active than when we are awake.

Sleep is a state of reduced awareness that is relatively easy to reverse (unlike a coma or hibernation). Some awareness of the environment around us remains during sleep, particularly our responses to sound (for example, a mother will hear her baby crying but may not wake to the sound of cars passing outside).

In humans, sleep is usually associated with having our eyes closed and laying down – although not always!

A few symptoms of not getting enough sleep (sleep deprivation) are:

- Concentration difficulties
- Growth hormone issues
- Mental health issues
- Lowering of the immune system
- Hyperactivity
- Weight gain
- Behavioural issues
- Difficulty remembering things

Parents who are disturbed by their child's poor sleep patterns are also likely to suffer from sleep deprivation.

Source:

Tham, E. K., Schneider, N., & Broekman, B. F. (2017). Infant sleep and its relation with cognition and growth: a narrative review. Nature and Science of Sleep, 9, 135–149.

Wolfson AR, Carskadon MA. Understanding adolescents' sleep patterns and school performance: a critical appraisal. Sleep Med Rev. 2003 Dec;7(6):491-506.

Casoff J, Bhatti JA, Gruber R. The effect of sleep restriction on neurobehavioural functioning in normally developing children and adolescents: insights from the Attention, Behaviour and Sleep Laboratory. Pathol Biol (Paris). 2014 Oct; 62 (5):319-31.

Who has produced this toolkit?

This toolkit has been produced in partnership by:

School Health Nursing, Sirona Care and Health

Kings' Forest Primary School

King's Oak Academy Primary School

Off the Record

South Gloucestershire Council - Public Health & Wellbeing, Early Years, Educational Psychology, Child and Adolescent Mental Health Service



The Sleep Cycle

At night time we experience different levels of sleep and we sleep in cycles. The stages of a sleep cycle are:

Non-Rapid Eye Movement (Non-REM)

Stage 1 – a very light sleep, where you will be easily woken. If you have ever tried tip toeing out of your child’s bedroom and they’ve woken this is why – they were in a very light sleep.

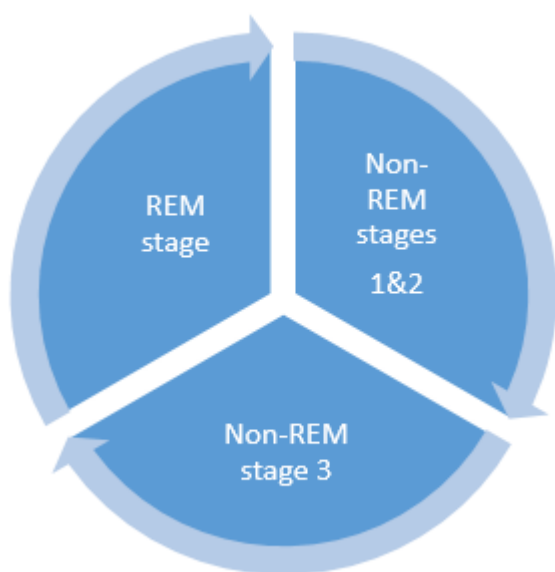
Stage 2 – still quite a light sleep but the body is preparing for the deep sleep that is about to come. Your child will be more relaxed now and if you are trying to sneak out of their bedroom this is a good time to make your exit!

Stage 3 – this is a very deep sleep. The body needs this sleep so that repair can take place. It will be difficult to wake your child when they are in this stage.

Rapid eye movement (REM stage)

Sleep then moves into a phase of Rapid Eye Movement (REM stage). REM stage sleep is when dreams occur. It is vital for mental and emotional development. Brains can become very active during REM sleep yet out bodies are relaxed.

Figure 1: Non-Rapid Eye Movement (Non-REM) and Rapid Eye movement (REM) stages

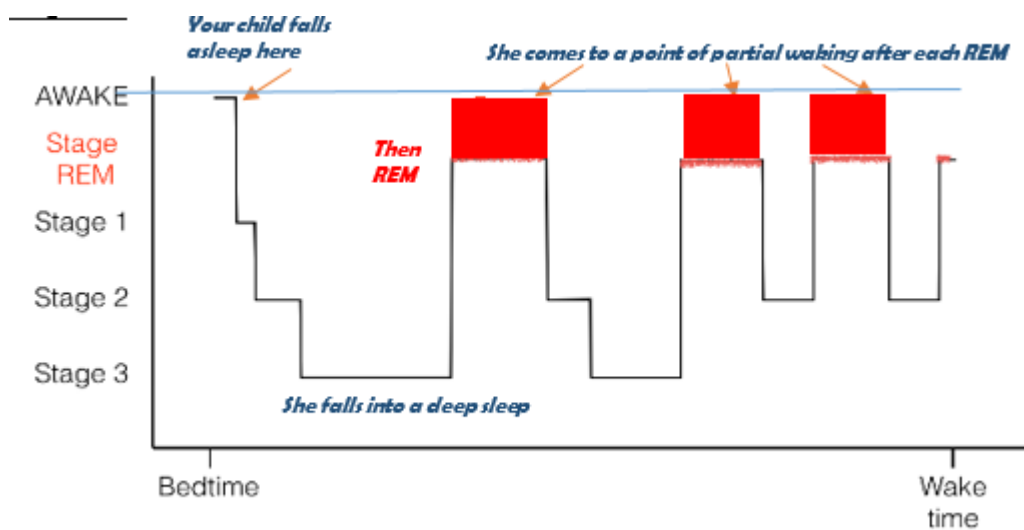


Each cycle usually lasts for around 90 minutes and is slightly shorter for infants (45-60 mins)

The sleep cycles occur throughout the night. We are usually in deep sleep towards the beginning of the night and lighter sleep in the early hours of the morning.

After each cycle we come to a point of partial waking (the red bars on figure 2). If everything is as it was when we fell asleep we may well just roll over and carry on sleeping as in figure 2:

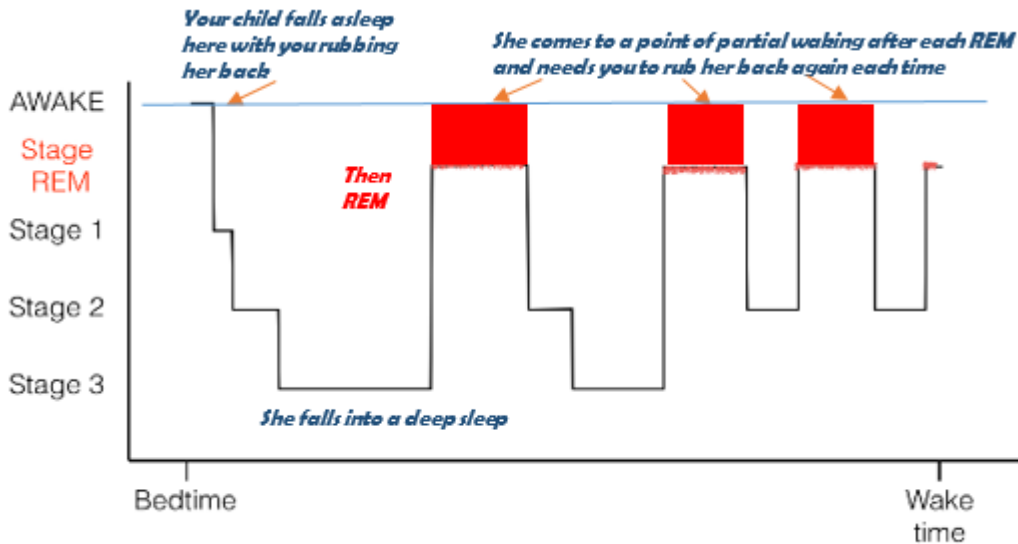
Figure 2



Source: Sleep Training, Southampton

If anything has changed however.....that's when we wake up, as described in figure 3:

Figure 3



Source: *Sleep Training, Southampton*

It is important for sleep conditions to remain the same throughout the night as connecting sleep cycles is about waking and feeling safe and secure enough to drift back off to sleep. This often happens when children are developmentally ready and have a secure environment. Infants often need parental input to fall asleep and connect their sleep cycles as they are not developmentally ready to 'self soothe'.

Circadian Rhythm, often called the 'body clock'

We all have a sleep-wake cycle known as the circadian rhythm or body clock which is regulated by light and dark. The rhythms take time to develop in new-borns and it is very normal for infants and young children to wake regularly during the night. By about 6 months most babies have a regular sleep-wake cycle. Putting children to bed at the same time each night and waking them up at the same time each morning, even at weekends, will help to enable a regular sleep-wake cycle. When the hour changes from winter time to summer time some children's sleep-wake cycle goes off track. A child's sleep-wake cycle can be reset by bringing bedtime forward by 15 minutes every three nights until the desired time is reached.

Melatonin

Melatonin is a hormone that occurs naturally in our body when it gets dark. It helps us sleep. It is a good idea to put your child to bed in a dark environment and dim lights in the run up to bedtime.

Melatonin production is negatively affected by screen activity, like watching a television/iPad or playing computer games. The light from the screen stops melatonin being produced. Avoiding these activities in the hour (or more) leading up to bedtime is a good idea to help the sleep cycle. Some children and those with autistic spectrum disorder may produce less melatonin.

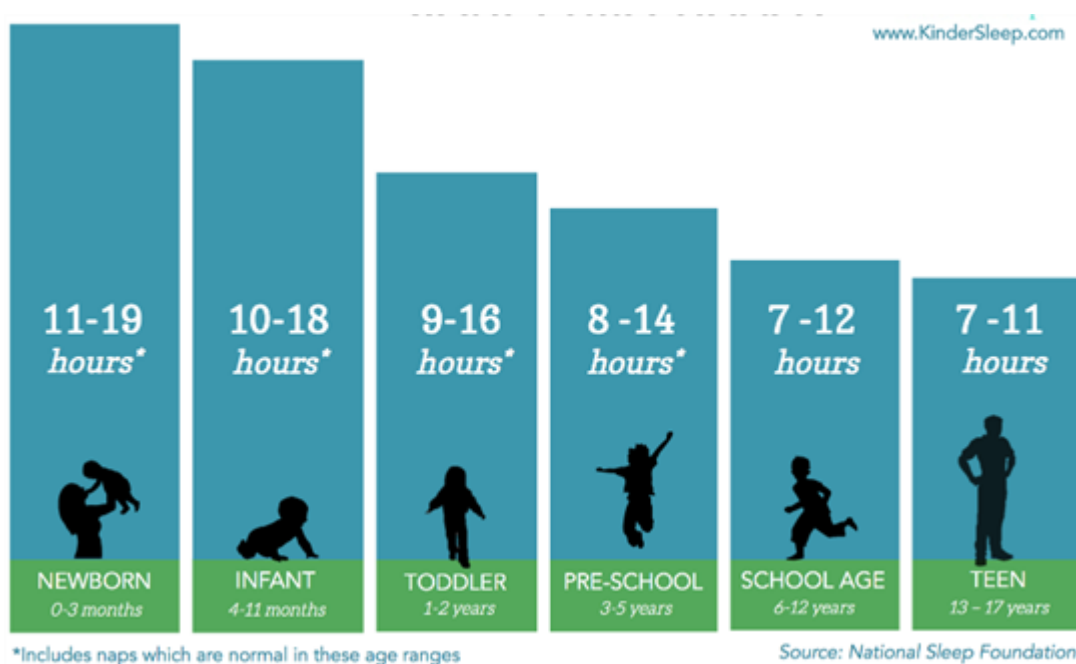
Source: Sleep Health Foundation

<https://sleepfoundation.org/sleep-topics/how-blue-light-affects-kids-sleep>

How much sleep is needed? Sleep duration

Sleep needs change as children get older and every human requires a different amount of sleep throughout their life. However, there is a recommended number of hours to aim for:

Figure 4



Research suggests that, in Western societies, many adults and some children and young people are under-sleeping by roughly one hour per night due to lifestyle changes. When accumulated over one week this adds up to a sleep deficit of about one full night.

Source: Royal Society for Public Health (2016) *Waking up to the Benefits of Sleep*, University of Oxford

Sleep routines, sometimes called 'sleep hygiene'

Daytime activities

What happens in the day can effect sleep: exercise improves sleep onset (how long it takes to fall asleep). Diet during the day can affect sleep. Caffeine blocks the sleep-wake regulation.

Sleep Environment

The sleep environment needs to be safe, a comfortable temperature, with space to lie down, low level of noise, low light or darkness and a lack of distractions.

Bedtime routines

Routines can teach children to associate a sequence of events e.g. upstairs, bath, brush teeth, PJs, to bed, story time etc. with bedtime and sleep.

What we know about children's and young people's sleep in South Gloucestershire

What we know about children's and young people's sleep in South Gloucestershire

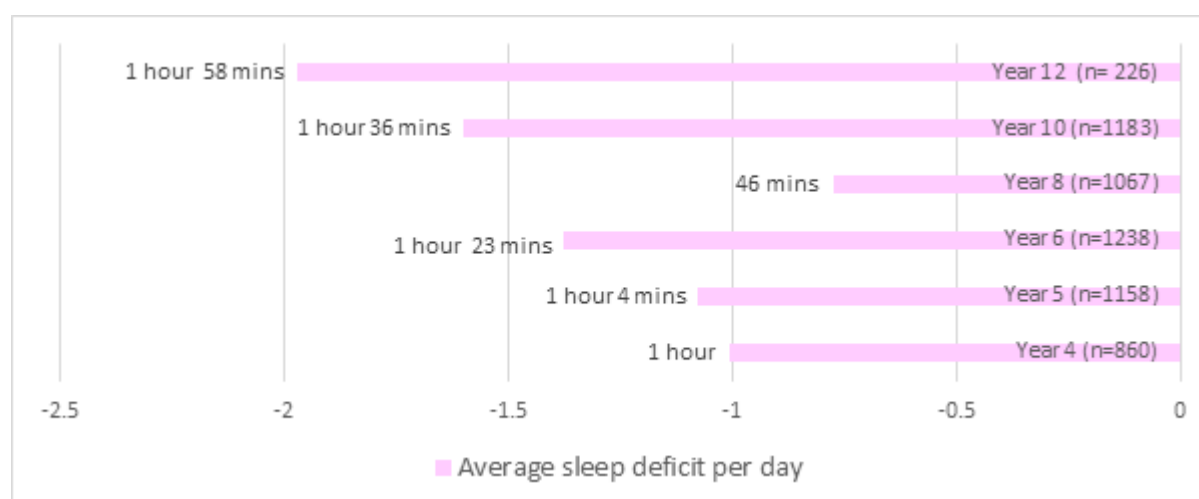
The following data are from the most recent South Gloucestershire health and wellbeing online pupil survey[1].

- 31% of Y6 pupils (10/11 years old) report regularly going to bed at 10pm or later.
- 29% of Y4, 5 & 6 pupils (7-11 years old) report taking 2 or more hours to go to sleep once in bed.
- 31% Y4, 5 & 6 pupils are spending this time watching TV or playing computer games.
- 82% of Y8&10 pupils (13-15 years old) report regularly going to bed at 10pm or later.
- 20% of Y8&10 pupils report being so worried about something quite often/most nights that they cannot sleep at night.

Deficit sleep in children and young people

Figure 5 shows as children get older they are getting less sleep than the recommended amount. These data are taken from the most recent South Gloucestershire health and wellbeing online pupil survey, where pupils were asked to select what time they went to bed and what time they woke up.

Figure 5

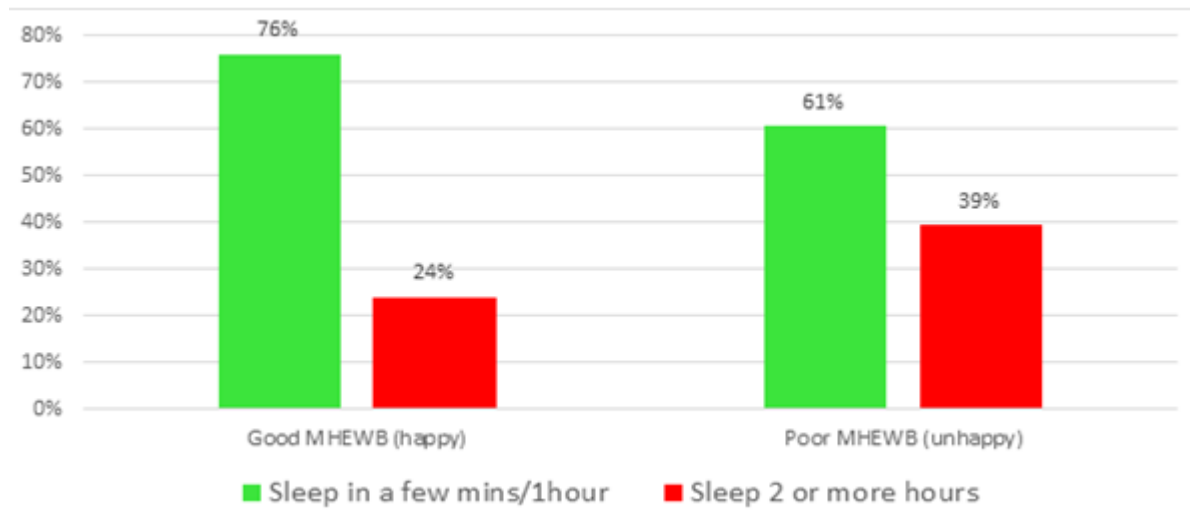


The effect of sleeping habits on primary and secondary pupils' mental health and

emotional wellbeing

Figure 6 highlights how time taken to get to sleep at night impacts on the mental health and emotional wellbeing. Those pupils who report going to sleep in less than one hour after going to bed are more likely to have good mental health and emotional wellbeing than those pupils who take more than 2 hours to go to sleep.

Figure 6



[1] Health and Wellbeing online pupil survey (OPS) summary reports for 2014 and 2017 [accessed here](#)

Caring for your young child at night

Why is sleep important? What is typical and natural sleep for infants?

This section summarises some key points about infant's sleep and shares some excellent resources where more detailed information can be found.

Sleep is a natural process which allows our bodies to regulate and repair to keep us healthy. In humans, sleep is known to be vital for brain development, processing the day's events and converting learning into long-term memory systems. Sleep moves through REM sleep (in which our brain is very active and vivid dreams occur, especially important for babies and children) and Non-REM sleep (in which brains are less active and we slowly fall into a deeper sleep). New-born babies move rapidly in and out of REM and non REM throughout the night and are in REM sleep for 50% of the night, 20% more than adults!

As part of the natural process, sleep develops in cycles over time, which can vary between individual children. The 'circadian rhythm' is the general sleep/wake cycle most adults follow, however babies are not born with this established and sleep more at night. On average, this develops from approximately 4 months of age. Many parents find their children's sleep patterns challenging, however a lot of anxiety is often because we have unrealistic expectations of how infants and children sleep.

The current thinking about young children's sleep

In the past we have tried to *train* our infants to sleep, new research however shows that this may have detrimental effects on the brain development of children, the quality of their sleep and may also impact on your relationship with your child.[\[2\]](#)

Current approaches to sleep are more flexible and individualised:

Table 1:

<i>Individualised</i>	Children mature at different rates and we should respond to their individual needs at night. Some children will need more parental support to fall asleep than others.
<i>Responsive</i>	It is important for parents to be sensitive and responsive to their infant's needs during the day and this should also continue at night.

<i>Compassionate acceptance</i>	Being compassionate about your infant's needs at night; their fears and preferences and your own support needs as parents can help you to feel more relaxed about the topic of sleep. It is very normal for young children to wake during the night and need support from their parents to get back to sleep.
<i>Flexible routines</i>	Routines can be helpful for infants but if they are too rigid and inflexible they can be difficult to fit into busy family lives. Having flexible routines before bed that help infants feel connected, safe and relaxed will support the natural process of sleep.

Source:

https://www.dur.ac.uk/resources/isis.online/pdfs/ISIS_sleep-training_2015.pdf
<https://www.isisonline.org.uk/>

Safety factors to consider

It is important to ensure that your infant is safe at night, your midwife or health visitor will be able to discuss safety guidelines with you. They can also be found on the Infant Sleep Information Source website or APP or the UNICEF Guide to Caring for your Baby at Night (in the "Help & Information" section).

Looking after yourself if you are looking after a young child

Caring for a baby or young child can be tiring and so it is important to look after yourself so that you have the energy and capacity to look after your child. Getting positive help and support from friends and family can make a real difference, as can resting in the day while baby sleeps. If you feel you are struggling and have limited support, talk to a health professional about your worries.

[2] Middlemiss, W. et al (2012) Asynchrony of mother-infant hypothalamic-pituitary-adrenal activity following extinction of infant crying responses induced during the transition to sleep. *Early Human Development* [online]. 88, pp. 227-232

Help and Information

For local support and information about infant sleep contact your Health Visitor:

How do I access the service?

By phone: You can call your health visitor at any time during office hours. All teams have an answer machine where you can leave a message during times when nobody is available to take your call. If you are not sure of the number of your health visiting team you can contact the service on 01225 838555.

In person: You can drop into any of the baby hubs or baby clinics across South Gloucestershire. Baby hubs are gradually replacing baby clinics as supportive drop-ins that offer families support and information around early parenting.

Organisations and websites:

- Infant Sleep Information Service: An evidence based [website](#) with excellent information for parents, families and health professionals
- [Caring for your baby at night - A Guide for Parents](#)

Books to read:

- *Sweet Sleep: Night time and Naptime Strategies for the Breastfeeding Family*, by La Leche League International
- *The Gentle Sleep Book*, by Sarah Ockwell-Smith



Details of Booktrust's 'Bath, Book Bed' campaign are here:

<http://www.southglos.gov.uk/leisure-and-culture/libraries/libraries-childrens-services/bath-book-bed/> . Parents and carers can download the booklet or pick one up from the library. It gives a simple message of establishing a routine to help everyone get a good night's sleep.

Apps:

Infant Sleep Information Service - [*Infant Sleep Info*](#) (a useful app for parents)

Bedtime Action Plan

Developed by Health Visiting Service, Portage Team, Early Years Team and Educational Psychology (Taken from 'The Gentle Sleep Book' by Sarah Ockwell-Smith).

Bed sharing/co-sleeping

- Be aware of all of the safety guidelines

Expectations

- How do your expectations compare with the norms of sleep for a child the same age?
- Is bed-time appropriate for their age?
- Are you giving your child sufficient time at home after any pre-school/nursery to allow hormone levels to drop before bedtime routines begin?
- Do you have at least ½ hr of calming bedtime routines that are followed fairly consistently every day?

Diet

- Is your child having a balanced diet, appropriate for their age?
- It may be useful to discuss this with your health visitor

Transitional objects

- Does your child have a comfort object? This object should be associated with you, so that your child can take comfort from it when you are not there.
- If your child is attached to one object, try to get hold of a second one in case it gets lost.

IT

- How much time does your child spend in front of a screen? Try to avoid screens for 2 hrs before your child needs to sleep.
- Try your best to avoid anything on TV that might cause fear for your child.
- Avoid having a TV in your child's bedroom and minimise other screens in their room too (e.g.- tablets)

Me-time

- How much support do you have from others around you?
- Do you feel you are able to look after yourself?

Environment

- Is the lighting in your house able to dim in the evenings?
- If your child's bedroom is not able to be completely dark at night time, consider using red light bulbs.
- Spend time playing in your child's room in the day in order to associate it as a happy place.
- Avoid disciplining young children using their bedroom, so they do not make negative associations.