



***What About Sleep?***  
***Nursery School***



**Interactive slide – animations**

We all know that to stay healthy we have to eat the right foods and take regular exercise.

The third thing we have to do to make sure we stay healthy is to get the right amount of good sleep.

We need sleep to live and we need enough good sleep to stay healthy.

# What is sleep?

## What is sleep?

### Sleep is:

- natural behaviour
- reversible state of reduced awareness
- dynamic – there's a lot going on!

### Lack of sleep affects our:

- emotional well being
- physical health

*See Chapter 1 for further information.*

#### Sleep is -

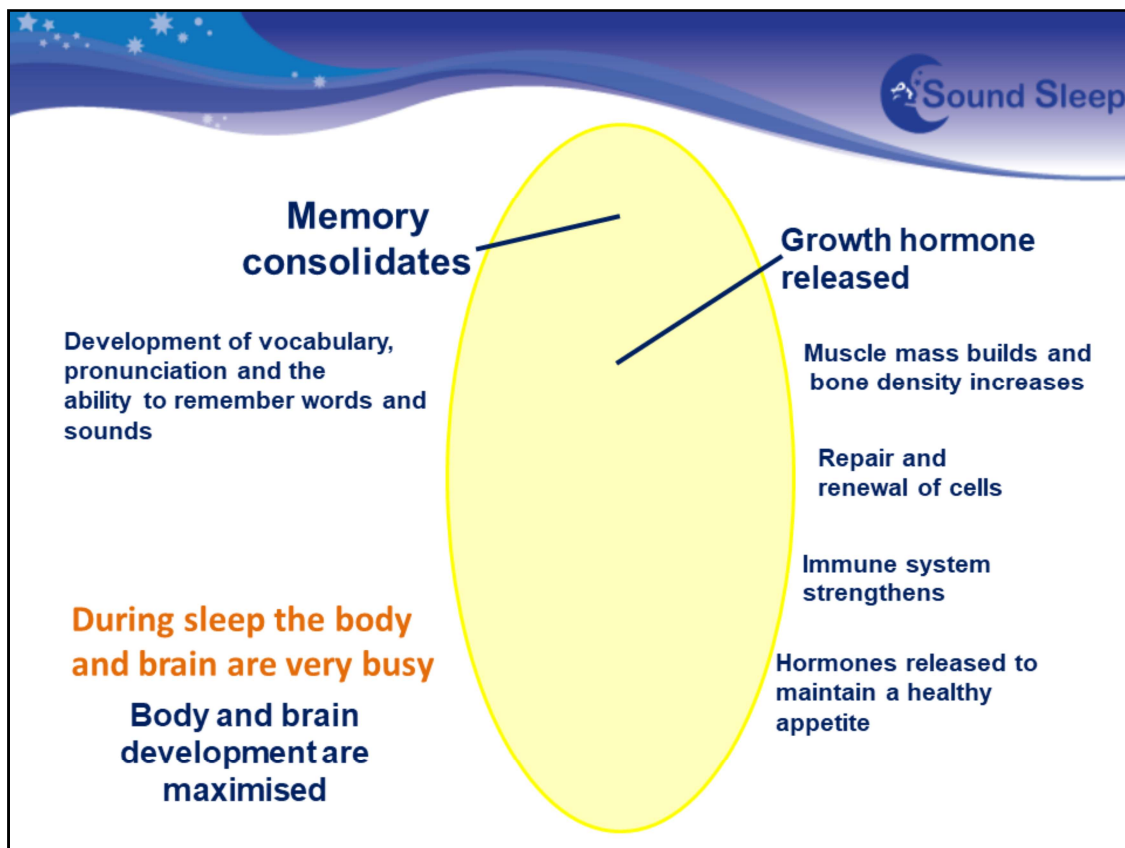
- **a natural behaviour** - sleep is part of everyone's life. Eventually no matter how hard we fight it we will want to sleep for at least part of every 24 hours.
- **reversible state of reduced awareness** - to our environment and surroundings.
- **dynamic** - contrary to the popular saying 'slept like a log' we do not turn off completely during sleep and become 'wooden' and lifeless. There are lots of important processes occurring during this time that are vital to our existence.

All animals sleep in response to natural rhythms that they have. Human beings also have a natural rhythm but are the only animals that deliberately try to reduce the amount of sleep they have and change their sleep patterns. Our sleep is getting worse in the 21<sup>st</sup> century due to our 24/7 lifestyles.

#### Lack of sleep affects our -

- **emotional wellbeing** - lack of sleep may cause depression, anxiety, stress and inability to regulate emotion.
- **physical health** - lack of sleep may also cause obesity, diabetes and contribute to conditions in later life such as heart conditions and strokes.

# What happens when you sleep?



See Chapters 1 & 3 for further information.

### Interactive slide - animations

When you are asleep your body is very busy doing lots of important stuff. There are many hormones released while you sleep including;

**Growth Hormone** - It plays a part in many activities that take place in your body while you sleep....

**Growing** - As a child most of your growing is done while you are asleep. Your brain also develops and changes.

**Repair and maintenance** - Your body works hard to repair all the little bumps and scrapes that you get during the day as well as helping you to get better if you have been ill.

**Muscle and bone development and strengthening** - Your muscles and bones strengthen when you are asleep.

**Immune system** - Your body's natural defence system against disease and illness builds its own strength while you sleep.

**Appetite control** - There is a hormone called LEPTIN that is released while you are sleeping, this helps you have a normal appetite. If you are sleep deprived, LEPTIN gets suppressed and another hormone called GHRELIN is produced which makes you hungry – especially for fattening, energy dense foods like carbohydrates. This can lead to weight gain

**Memory** - Information we have learned during the day becomes 'hard-wired' and **memory is moved from short-term to long-term**. This is an important part of learning.

**Positive memories** - There is a part of your brain that stores your positive memories and this can be affected when you don't get enough sleep. This means that you may remember more of the negative things which can make you more likely to feel unhappy.

**How much sleep should  
children be getting?**

## Body clock

- Virtually every animal has a body clock that governs its circadian rhythm
- Our circadian rhythm controls many of our bodily functions including sleep
- Our body clock prompts the release of two hormones which affect our sleep:
  - **melatonin**
  - **cortisol**

Our **circadian rhythm** or **body clock** is controlled by a group of cells located in the **hypothalamus** of the brain.

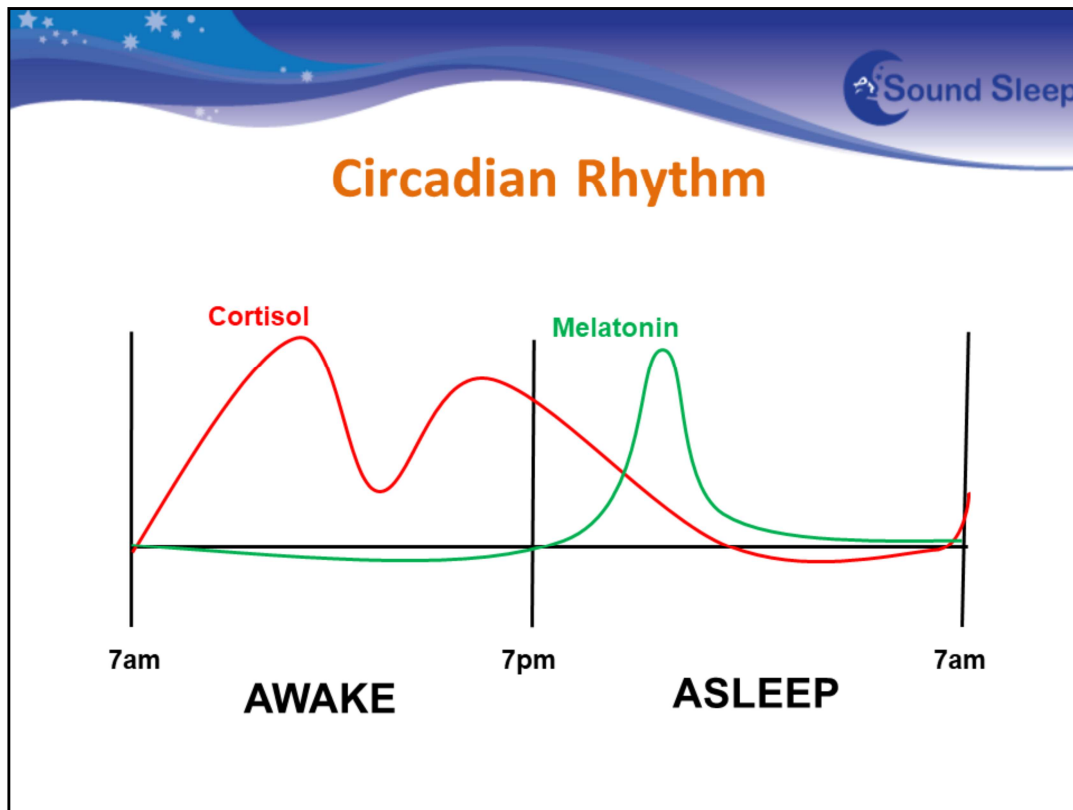
In order to keep our body clock regulated, our bodies react to external stimuli called **zeitgebers** (a German word meaning 'time-givers').

**Light** is one of the most important zeitgebers. Other zeitgebers include; meals, social interactions, exercise, external temperature and sound.

**Zeitgebers reset our body clocks every day.**

We are designed to want to sleep through the darkest period of the 24 hours and be active and alerted during the day. Our bodies recognise the changes in light and temperature and react to these signals by making us feel sleepy.





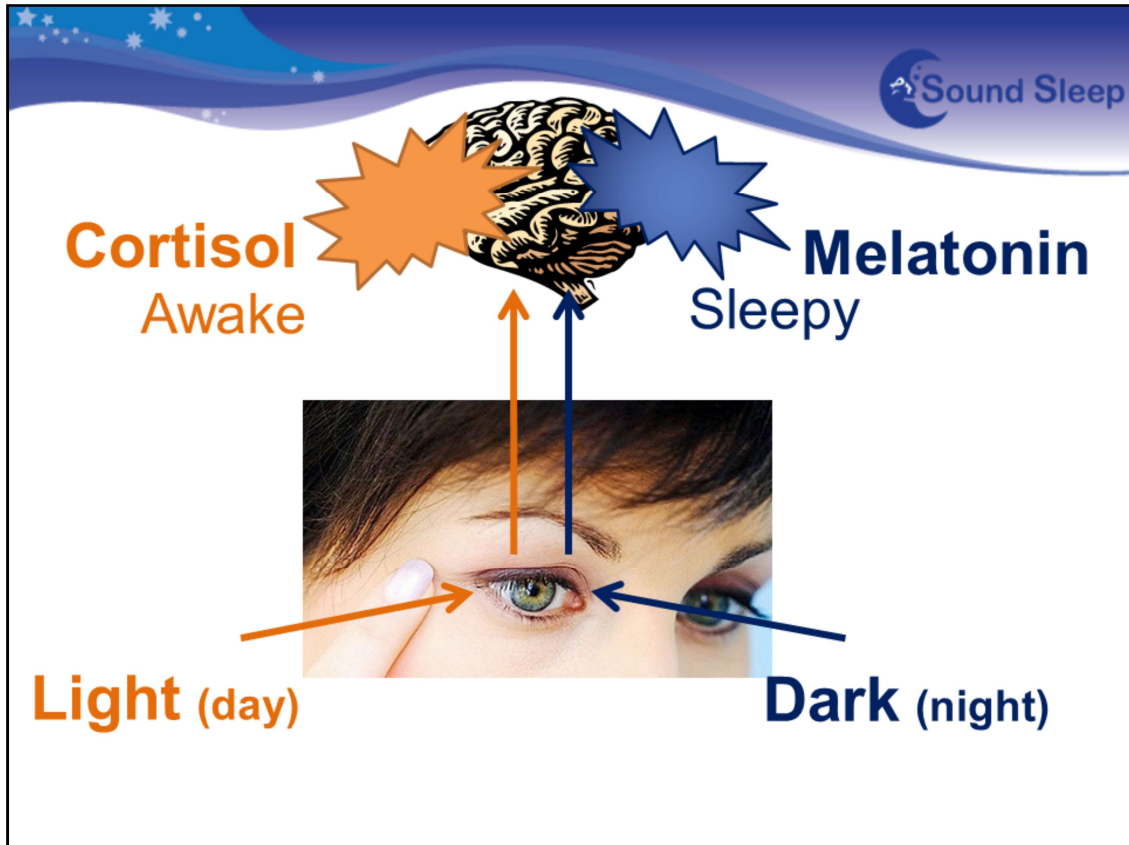
### Interactive slide – animations

**Cortisol** is released in a big burst first thing in the morning to wake us up and then keep us going throughout the day.

We may feel sleepy, want an afternoon nap or be drowsy after a heavy lunch because we have a natural dip in Cortisol mid afternoon.

The way our society has evolved in the last 200 years has led us to suppress this natural inclination and to sleep only once during the 24 hour period. In some societies, however, the afternoon nap, or siesta, is still the norm and their working day may be split accordingly.

**Melatonin** is usually released around half an hour or so before your usual sleep time. It is released in a big surge to help you feel sleepy so that you can get off to sleep when you normally do.



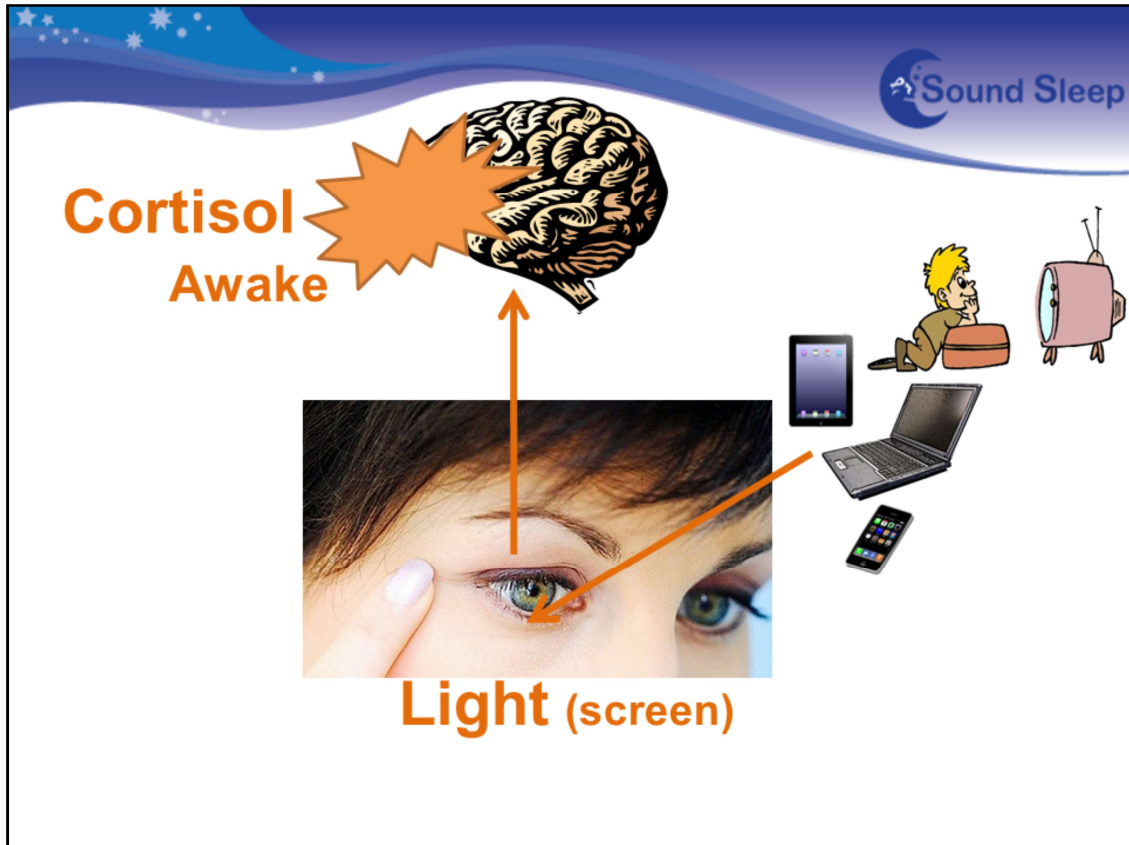
#### Interactive slide – animations

In the human eyes, there are **light receptors** that are not designed to help us see but are linked to our body clocks.

Our body clocks detect a change from **light to dark** and send signals to the a part of the brain that produces a hormone called **MELATONIN** that will make us **sleepy**.

A similar reaction takes place when the light receptors detect a change from **dark to light** – they send a message to the brain that tells the body to produce a different hormone called **CORTISOL** that wakes us up and keeps us **awake** and alert.

It is **blue light** that has the particular wavelength that our light receptors recognise.



#### Interactive slide – animations

**Blue light** from screens can be picked up by our receptors and make our brain think that it is still daytime which can prolong the production of CORTISOL - this means that our MELATONIN may not be produced and we may not feel sleepy when we should.

## What's a good bedtime environment?




## Bedtime environment

- Room is quiet and dark
- Comfortable room temperature (cool)
- Environmental noise kept to a minimum
- Room is clear of electronic equipment e.g. TV and game consoles
- Room is clear of distractions

Consider all of the following;

- The room is at the correct temperature – **COOL** (high temperatures can disturb sleep).
- There is very little light – **DARK** (and subdued lighting when getting ready for bed). Black out blinds or curtains are good in the summer months.
- Room to be **clear of distractions**, toys should be away out of sight if possible.
- **Remove electronic equipment** such as television and computer consoles, should be out of room, or put away.
- Make sure the environment is as **QUIET** as possible.
- Have **calm decor** – the aim is for the sleep room to be as boring as possible!
- **Remove any nocturnal pets.**
- Make sure the **bed is comfortable.**



## Before bedtime

- Avoid afternoon nap after 2pm
- Wind Down Routine should start no more than 1 hour before sleep time
- No screens (TV, phone, tablet etc)
- Quiet play
- Snack if required e.g. toast, cereal, milky drink - avoid sweets / biscuits, fizzy drinks, tea, coffee, hot chocolate

**Avoid napping after 2pm:** disrupts circadian rhythm (body clock), and may affect sleepiness later in the evening causing problems falling asleep, awakening through the night or too early in the morning. Watch out for unscheduled napping like falling asleep in the car or in front of the TV.


**Wind down hour:** this is the last hour before sleep – a time to chill out and start to leave the day behind. If you have a quiet hour every night, your body will become used to it and start to anticipate this relaxation period which will lead to the production of Melatonin.

**Screens:** The light that comes from televisions, tablets, computers and mobile phones can trick your brain into thinking it's still day time so you shouldn't use any of these things in your Wind Down Hour.

**Quiet play:** doing some quiet activities such as colouring in or completing a jigsaw puzzle can help you to unwind.

### **Sensible snacks – avoid sugary drinks or snacks**

Sugar gives your body energy so you feel more awake. Try not to have any sugary drinks or snacks after your dinner (or try not having them at all). A glass of milk helps you to start to feel sleepy before bed, especially if it is warm.



## Bedtime

- Consistent bedtime and wakening will reinforce circadian rhythm (body clock)
- Carry out steps in same order each night
- Relaxing bath, toothbrush then into bedroom, best not to return to sitting room
- Story – don't let it drag on!
- Light out – door left ajar if needed and leave to settle alone
- Lots of praise in the morning

**Same wake and sleep time:** a consistent routine strengthens your body clock and the times that your bodily functions occur i.e. sleep.

**Routine:** Follow the same bedtime routine, in the same order, at the same time every night.

**Bathtime:** A bath is a great way to get ready for going to sleep. It helps you to relax and unwind and if you do it every night, your body clock will know that this is what you do when you are getting ready for sleep. A shower is great for waking you up in the morning but not so good for making you feel sleepy at bedtime.

**Storytime:** Keep the story quite short and NOT exciting! The aim is to calm things right down and get relaxed ready for sleep.

**Light:** Don't have too much light. Turn off the overhead light and have a dim lamp instead. This change in light sends a message to your brain to say that it is almost time for bed. If there needs to be a night light then make sure it is out of direct line of vision.

## Example of a good bedtime routine

Time	Activity
5.30pm	Evening meal
6.00pm	Play time
7.00pm	Quiet play e.g. Jigsaw puzzles, train set Snack
7.20pm	Relaxing bath
7.40pm	Pyjamas, teeth cleaned and into bed
7.45pm	A bedtime story
7.55pm	Cuddles from family member
8.00pm	Leave to settle

You can create your own **evening and bedtime routine** that suits you and your family. This is an example of a nightly routine that sets out specific steps for specific times.



## Crucial elements of a good sleep routine

- Clear messages
- Consistency
- Timing



**Clear messages:** keep things as simple as possible. Perhaps visual aids could be used to put together a pictorial bedtime routine.

**Consistency:** follow the same routine each night – if there are different individuals managing the routine, make sure that everyone knows how important it is to do things in the same order and at the same time.

**Timing:** Make sure that the timings you set on your routine are realistic and achievable – once you have them worked out, stick to them as closely as possible – even at the weekend and during holidays.

## Summary

- Consider what goes on during the day – could anything potentially be affecting sleep?
- Get a good routine in place for the evening – make sure you are removing any potential barriers to good sleep
- Plan a ‘wind down hour’ and leave the day behind
- Try to have the bedroom as a ‘sleep room’ rather than a bedsit – even if you change things every night for the wind down hour

### **Interactive slide – animations**

Run through a summary of the main points of the presentation.



## Sleep Support Line

Children 18 months to 18 years

Monday – Thursday

10:00am – 4:00pm

**0800 138 6565**

**Email:** [sleepsupport@sleepscotland.org](mailto:sleepsupport@sleepscotland.org)

Sleep Scotland now has a **Sleep Support Line** that families can call to get help and advice if their child is having difficulty sleeping. This service is available to all children in Scotland aged 18 months to 18 years and is completely free of charge.

The Support line operates **Monday to Thursday** between the hours of **10am and 4pm** but callbacks can be arranged outwith these hours and you can also email.