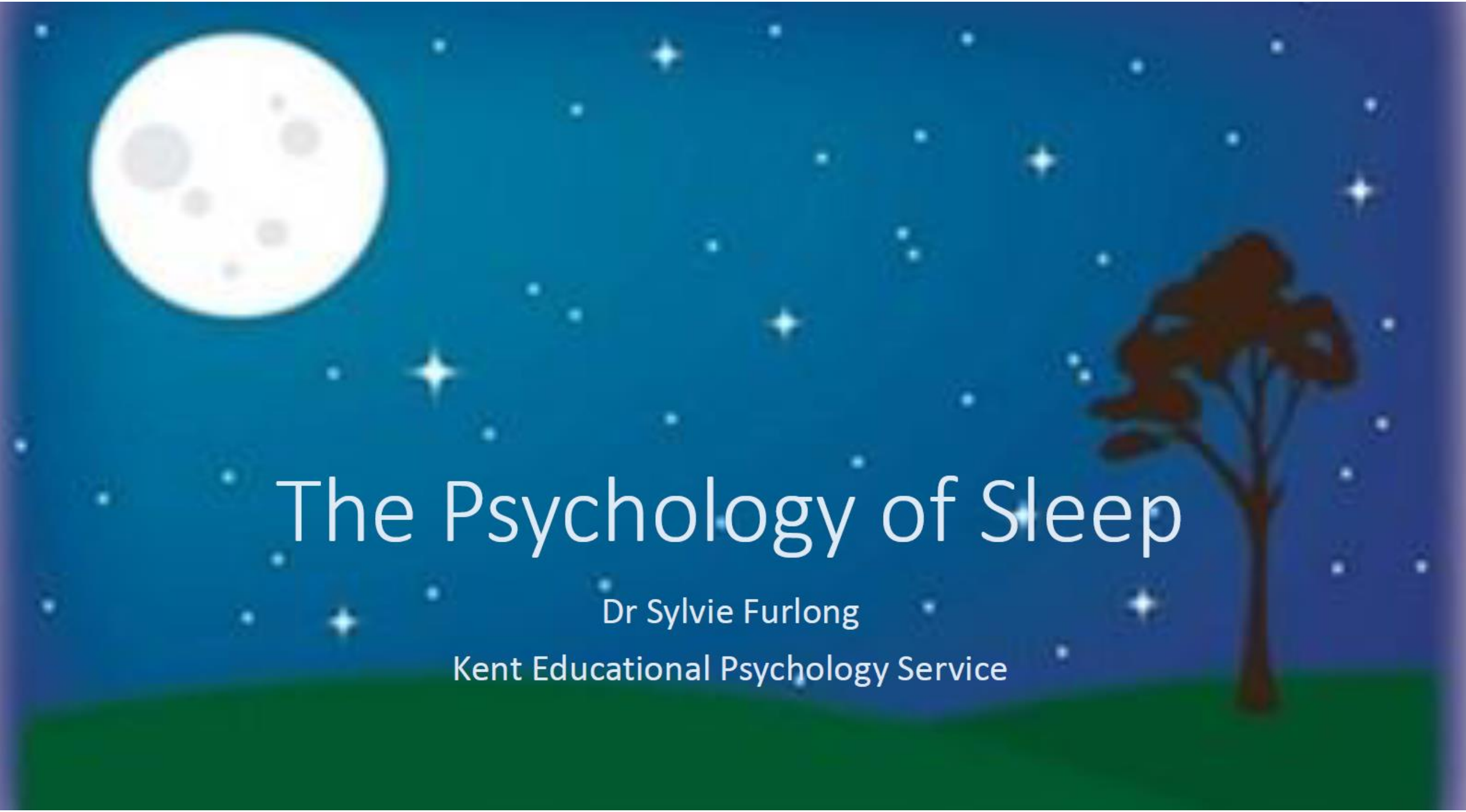
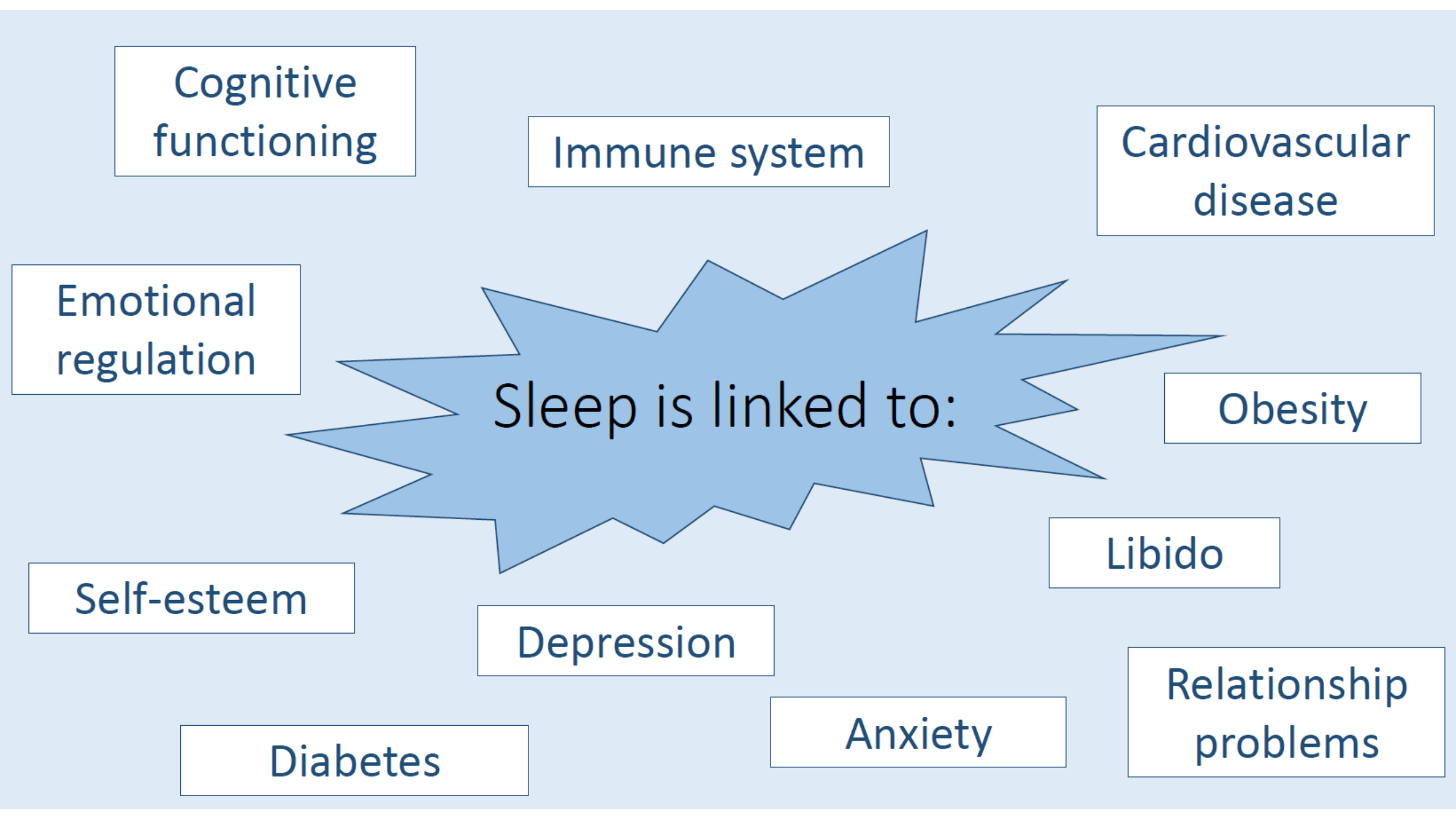
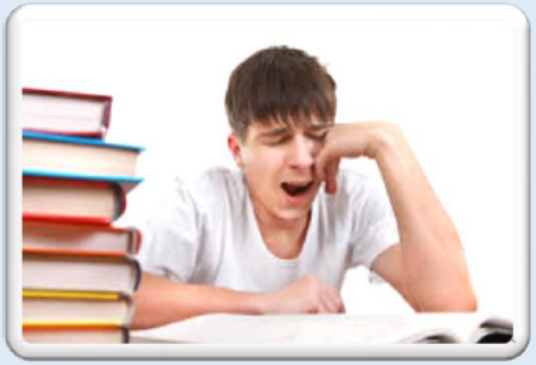

The Psychology of Sleep
Dr Sylvie Furlong
Kent Educational Psychology Service


Cognitive functioning
Immune system
Cardiovascular disease
Emotional regulation
Sleep is linked to:
Obesity
Libido
Self-esteem
Depression
Relationship problems
Anxiety
Diabetes

Sleep impacts the child, the family and all the systems around the child



RISKY BEHAVIOURS

Teenagers getting insufficient sleep are more likely to engage in risky behaviours

(Owens et al., 2016)

Sleep restriction has been found to have a detrimental impact on executive functioning

The part of the brain involved in risk taking behaviour and sensation seeking (**basal ganglia**) undergoes structural and functional changes in adolescence

Insufficient sleep is linked to changes in reward related decision making. Deficient sleep leads to decreased activation of the reward anticipation (**caudate nucleus**) part of the brain. So adolescents perceive less negative consequences and greater rewards for risky behaviours when chronically under slept.

When sleep goes wrong

Insomnia

Problems with falling asleep (sleep onset)

- Lying awake for a long time – worrying or just can't sleep
- Bedtime resistance
- Needing parent there to fall asleep

Problems with staying asleep (sleep maintenance)

- Waking up in the night and needing parent to help them get back to sleep
- Waking up in the night and staying awake for hours
- Waking very early in the morning

Asthma

Asthma is linked to disrupted and poor quality sleep.

Eczema

Children with eczema have more sleep disturbances than children without.

Autism and sleep problems

Autism Spectrum Disorder – difficulties in reciprocal social interaction and communication, and restricted or repetitive behaviour.

50-80%

have sleep problems

Autism and sleep problems- strategies to explore

REGULAR SLEEP WAKE SCHEDULE
TREATING EARLY AWAKENINGS AS NIGHT AWAKENINGS
CALMING BED TIME ROUTINE
NO SCREENS IN BEDROOMS OR BEFORE SLEEP
WEIGHTED BLANKET
REMOVING STIMULATING MATERIALS
BED BEING FOR SLEEP
CONSIDERING HOW THEY RESPOND TO TEMPERATURE, SKIN SENSITIVITES, PRESSURE
SAME WAKE AND SLEEP TIME AT WEEKENDS
STRUCTURED TRANSITION TO BED (TO SUPPORT CUES)
SLEEP ASSOCIATIONS!!!

ADHD and sleep problems

Attention Deficit Hyperactivity Disorder – inattention, impulsivity, hyperactivity.

25-73%

have sleep problems

Not every child with ADHD has poor sleep and vice versa…

Lack of sleep symptoms:

- Unable to focus
- Difficulties with attention
- Behavioural difficulties
- Mental health issues
- Difficulties with learning

ADHD symptoms:

- Unable to focus/ distracted
- Difficulties with attention
- Behavioural difficulties
- Mental health issues/ increased rates of depression
- Irritable
- Difficulties with learning

Treatment and support?

Graduated extinction if the child is scared of sleeping alone.

Reducing maladaptive sleep related behaviours (screens, caffeine, stimulants, noise).

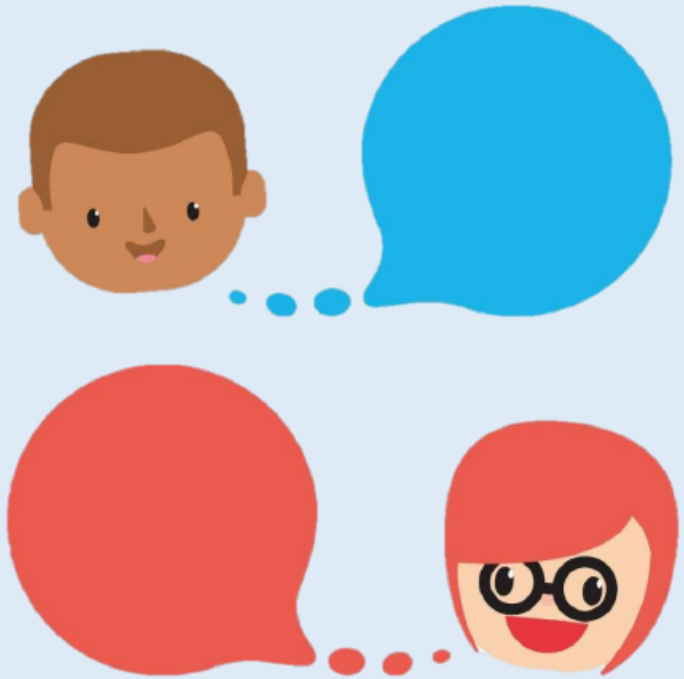
Encouraging the child to talk about worries and nightmares.

Structured bed time and sleep routine.

The use of CBT for insomnia and nightmares has been shown to significantly reduce global PTSD symptoms and insomnia.

What should professionals know about sleep (and share with families)?

- Why sleep is important
- How much sleep children need
- How to implement good sleep hygiene
- How to keep children safe while they sleep
- Strategies to help with common sleep problems



Age	NHS sleep duration recommendation
2 years	Daytime: 1 hr 30 minutes Nighttime: 11 hrs 30 minutes
3 years	Daytime: 0-45 minutes Nighttime: 11 hrs 30 minutes
4 years	11 hrs 30 minutes
5 years	11 hrs
6 years	10 hrs 45 minutes
7 years	10 hrs 30 minutes
8 years	10 hrs 15 minutes
9 years	10 hrs
10 years	9 hrs 45 minutes
11 years	9 hrs 30 minutes
12 years	9 hrs 15 minutes
13 years	9 hrs 15 minutes
14 years	9 hrs
15 years	9 hrs
16 years	9 hrs

Are they **alert, functioning well** and **thriving**?

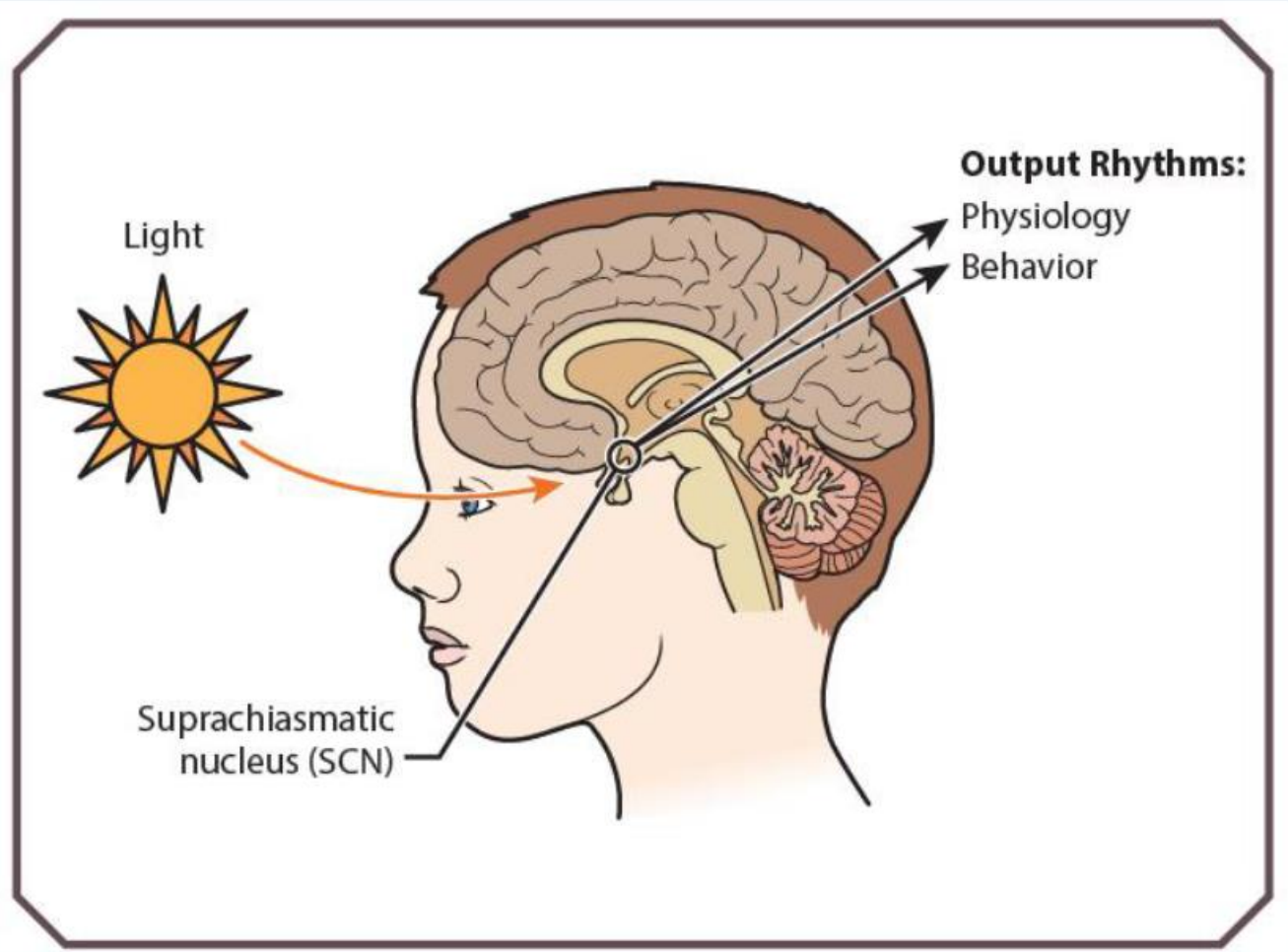
What is sleep hygiene?

- Practices and habits that promote good sleep and good daytime alertness – foundation of good sleep.
- Circadian rhythm hygiene – it doesn't just happen at night!

A good bedtime routine is calm and quiet and tells the body to be ready for sleep

Sleep hygiene: Light

- Light helps our bodies keep time and know when to wake up and when to go to sleep.
- Light and dark are signals that control our melatonin.
- Today, we rarely experience darkness and usually prolong the natural day using artificial light.
- We also spend a lot of time inside, where artificial lighting is much, much less bright than daylight outside (even on a cloudy day).



Blue light

- **Directly suppresses melatonin secretion**
- **Impacts circadian rhythm**
- **Impacts cognitive functioning**
- **Impacts alertness the next day**
- **Reduces time in REM sleep**

Blue LED lights are twice as powerful on melatonin suppression compared to yellow lights

A study comparing reading a book and a book on an Ipad, led to 50% decrease of melatonin secretion

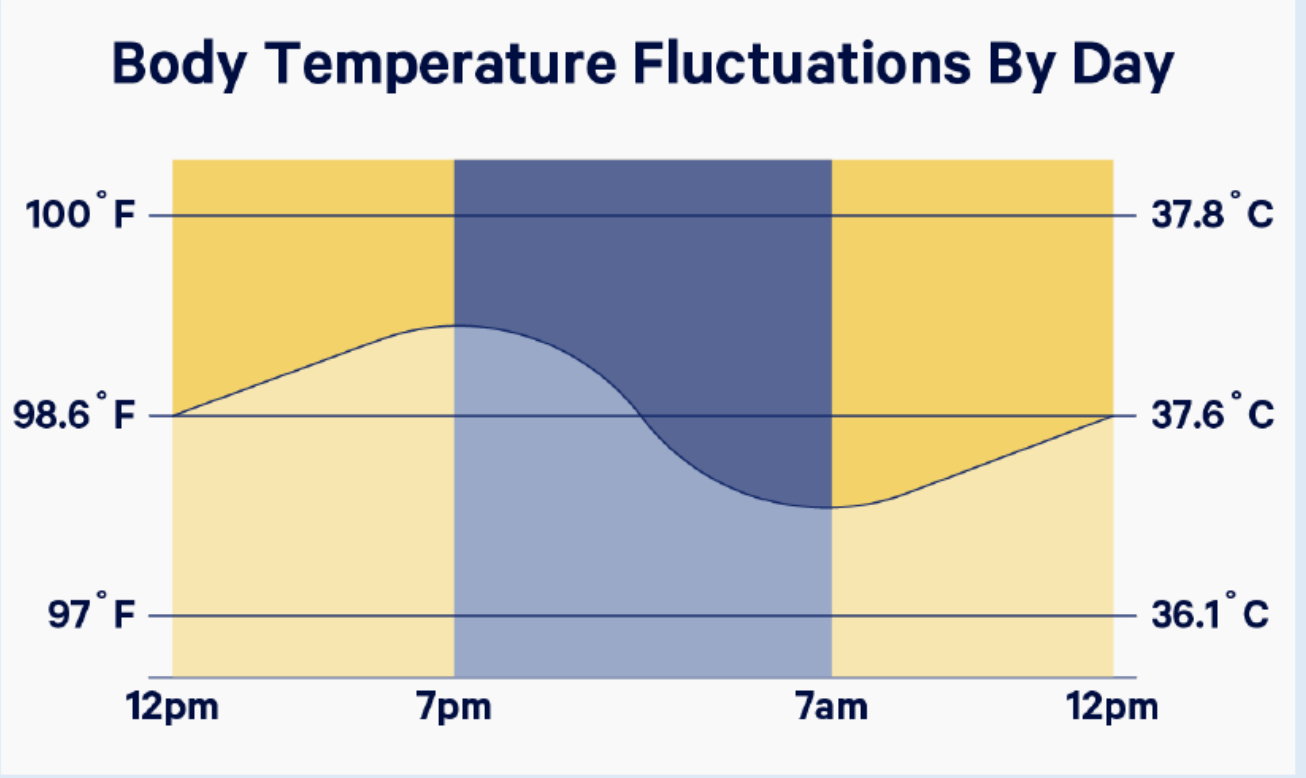
Sleep Hygiene: temperature

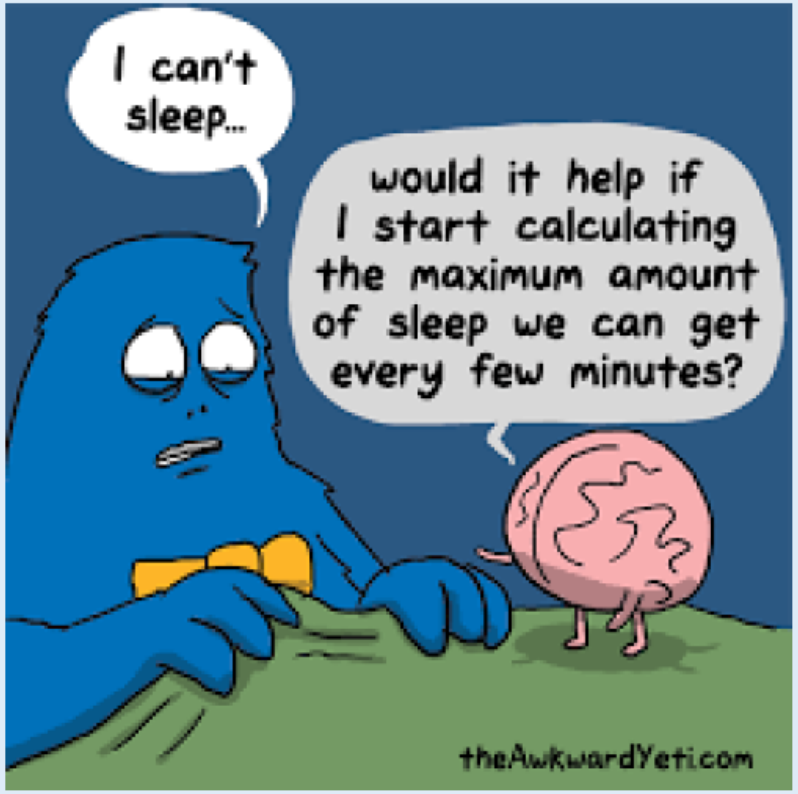
18.3 degrees

To successfully initiate sleep your body needs to decrease in temperature by 1°C.

Decrease in temperature is detected by cells in the hypothalamus which delivers messages to the suprachiasmatic nucleus which releases melatonin.

BATHS!





Sleep clinicians treating insomnia will always ask about room temperature

In a study of diagnosed adult insomniacs - adults were given whole body thermal suits that warmed the hands and feet to reduce the core body temperature, and cool the body during the night.

The insomniacs fell asleep **25% faster**
Prior to the study the group had a calculated 58% probability of waking in the night and struggling to return to sleep...

THIS REDUCED TO 4% and an increase in NREM sleep

Strategies and tips

- Bedtime pass
- Reward chart
- Light and timer (if Groclock, dim or switch off blue light)
- Bedtime routine visual timetable
- Social story
- Therapeutic stories for bedtime anxiety