
Australasian
Society of
Lifestyle
Medicine

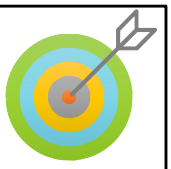
Sleep Physiology – Sleep quality

Unit: 3.3.3

Presenter: Dr Jenny Brockis

Version 1.0

Learning outcomes



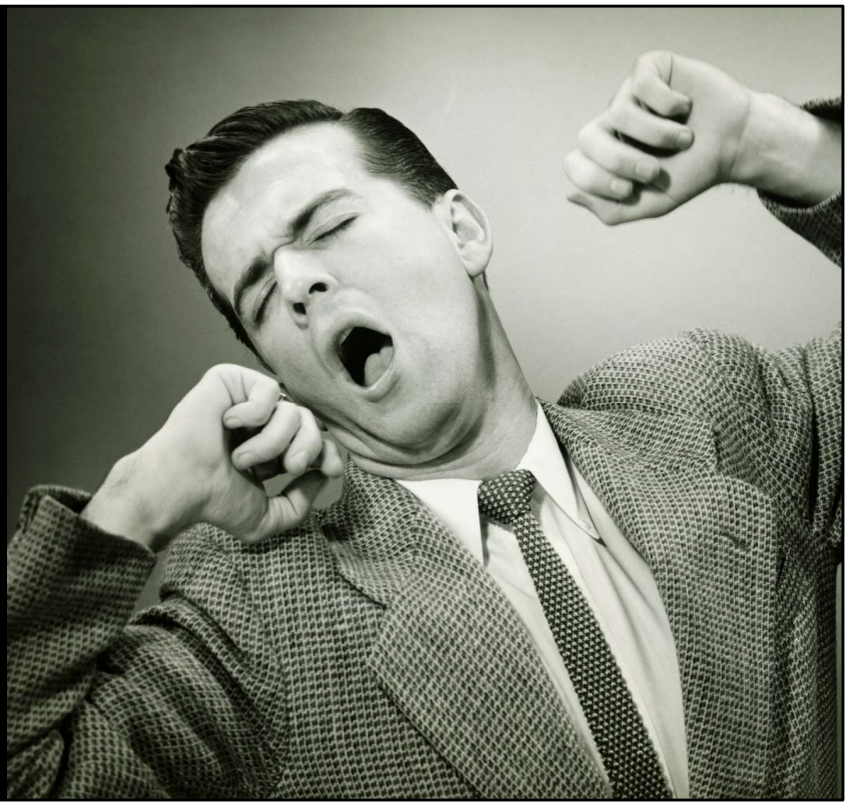
By the end of this topic, you will be able to:

1. Describe the impact current lifestyle and stress has on sleep
2. Identify the common stress culprits
3. Demonstrate how to perform a basic sleep assessment
4. Describe strategies to assist in reducing stress and enhancing sleep

Describe the impact current lifestyle and stress has on sleep

Tired of feeling tired

Dealing with daytime mental fatigue, sleep deprivation and the modern lifestyle



What's keeping you awake at night?

- Overwork
- Stress
- Anxiety
- Depression

- BDNF - brain-derived neurotrophic factor
- HPA - hypothalamic-pituitary-adrenal

The relationship between Insomnia and mental health is bidirectional
Having a mental health problem is associated with a higher incidence of sleep disturbance
Sleep problems can increase the risk for developing mood disorders
Treating the sleep problem can assist in alleviating some of the mental health symptoms
Prolonged stress leads to HPA hyperactivity leading to reduced sleep duration and quality (less time in REM and deep sleep) impacting memory, poorer mood regulation and compounds stress Levels of BDNF also reduced reducing neuroplasticity

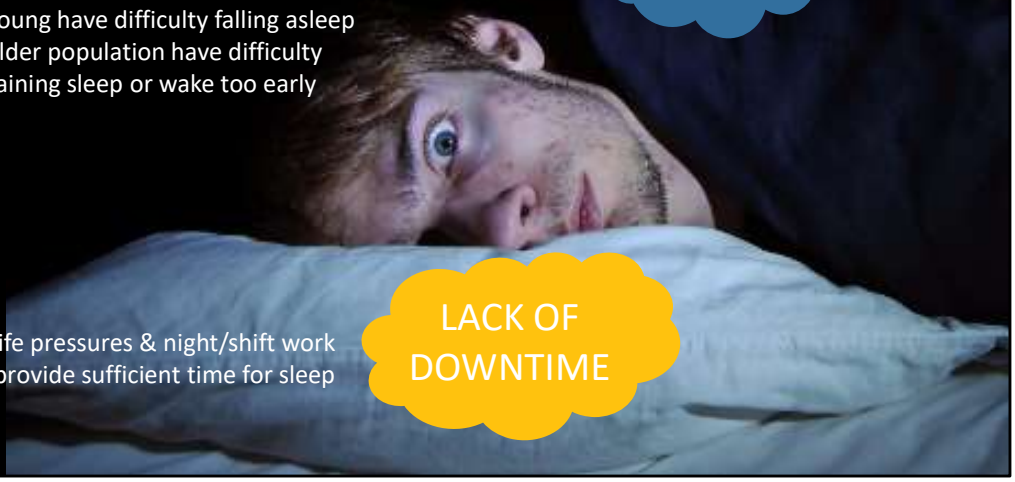
What's keeping you awake at night?

Women worry more about getting a good night's sleep or are more overwhelmed with thoughts during the night

GENDER

AGE

32% young have difficulty falling asleep
47% older population have difficulty maintaining sleep or wake too early

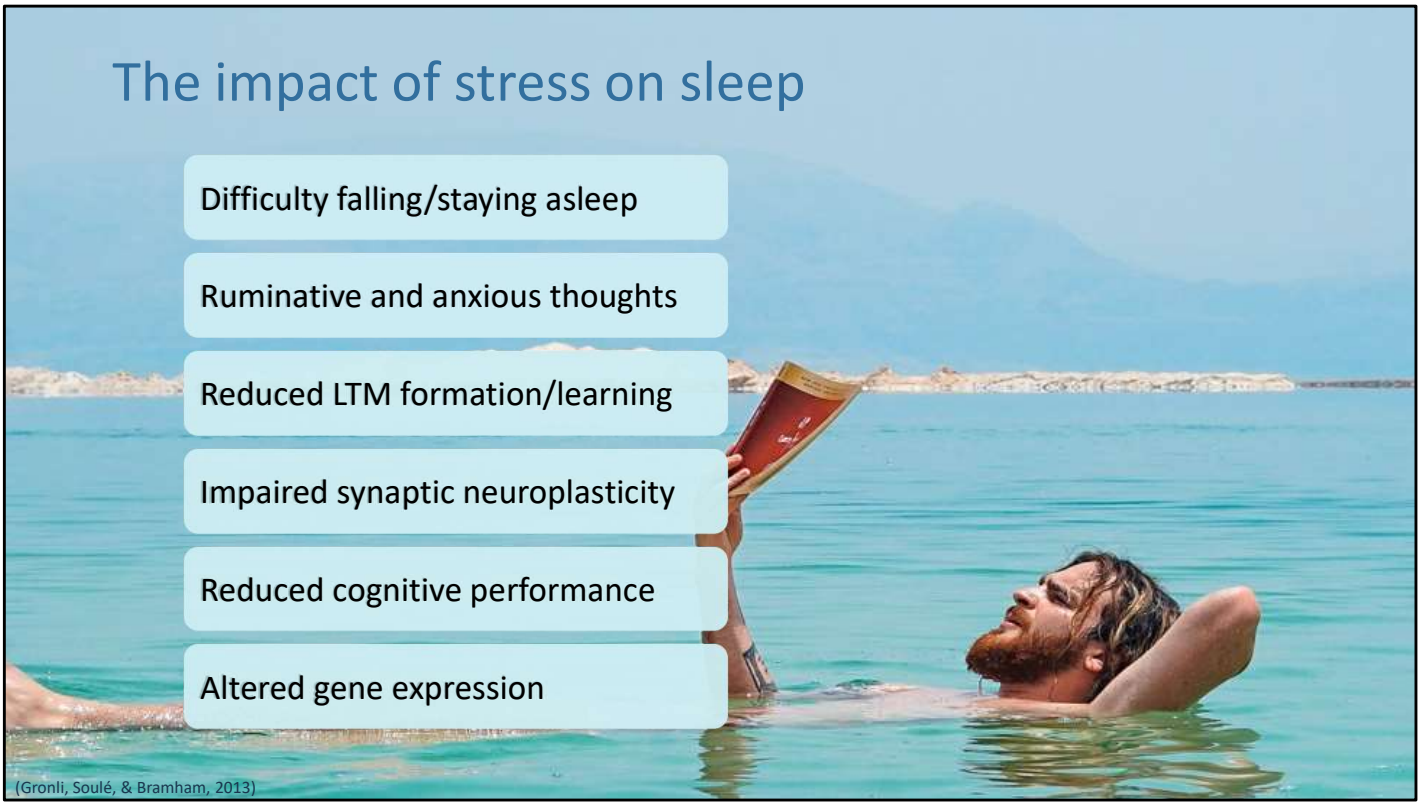


LACK OF DOWNTIME

Work/life pressures & night/shift work may not provide sufficient time for sleep

Identify the common stress culprits

Contributing factors



- LTM – long-term memory
- HPA – hypothalamic pituitary adrenal

Demonstrate how to perform a basic sleep assessment

Sleep health assessment

Basic assessment

How many hours sleep do you get on a typical weekday night?

How many hours sleep do you get on a typical weekend night?

How would you assess the quality of your sleep?

Do you lie in on the weekend?

Do you rely on coffee and your alarm to wake up?

Do you work shifts?

Do you work nights?

Basic assessment:

- How many hours sleep do you get on a typical weekday night?
- How many hours sleep do you get on a typical weekend night?
- How would you assess the quality of your sleep?
- Do you lie in on the weekend?
- Do you rely on coffee and your alarm?

Sleep health assessment

Sleep schedule

- Consensus Sleep Diary
- Personal preferences (lark vs owl)

Comorbidities

- Behaviours during sleep; medical, psychiatric, lifestyle, work history

Patient's perception

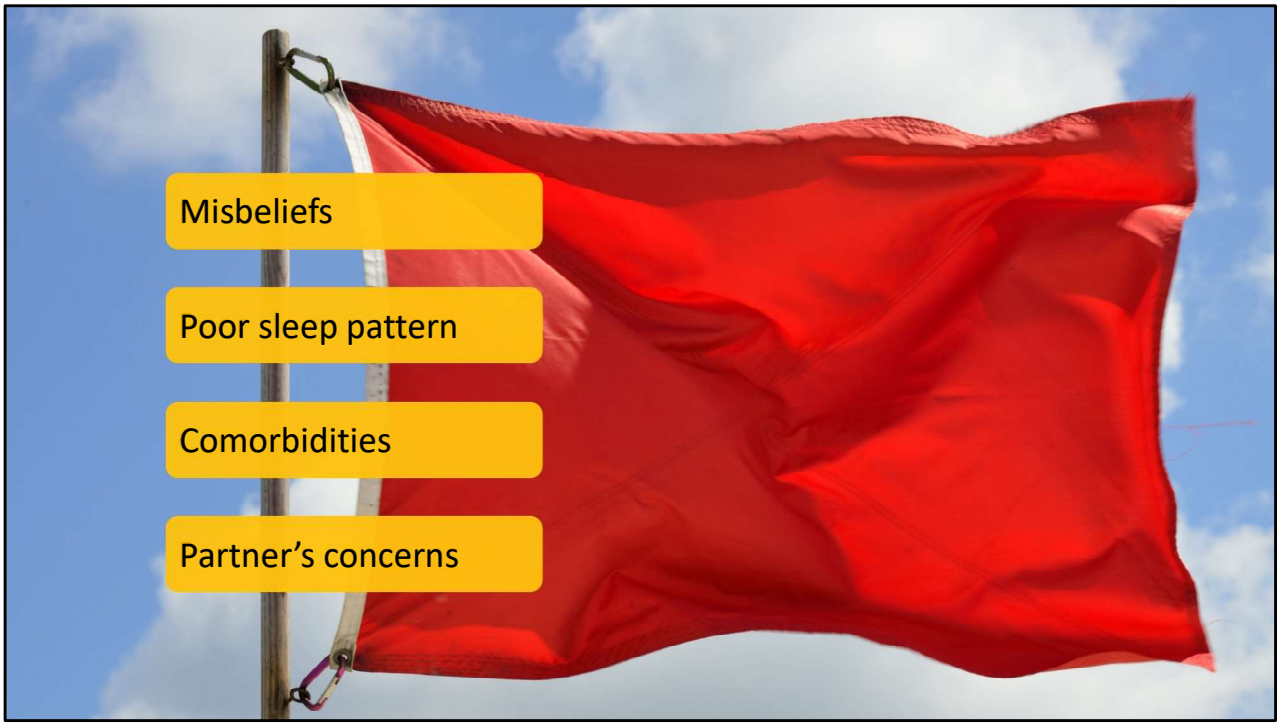
- Is this a problem for the patient?
  Rate severity with Epworth Sleepiness Scale or Insomnia Severity Index

Duration/Frequency

- Chronicity or previous episodes and past treatment

(Grima et al., 2019; Johns, n.d.; Oncology Nursing Society (ONS), n.d.)


Red flags



- "I don't need much sleep"
- "I've trained my self to do with less"
- Consistently less than seven hours sleep
- Irregular sleep pattern
- Medical condition (e.g. pain) known to impact sleep
- Poor sleep despite sufficient time spent in bed
- >1-hour time difference between weekday and weekend sleep
- "My partner tells me I snore a lot"
- "My partner tells me I hold my breath while asleep"

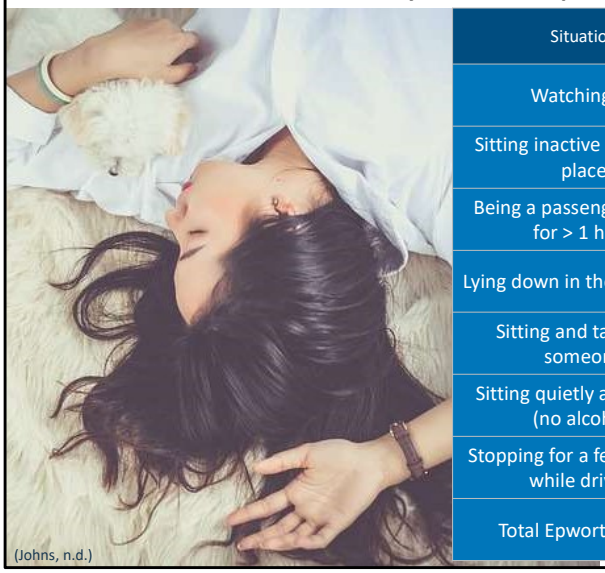
Sleep diary

	SUN	MON	TUE	WED	THU	FRI	SAT
Bedtime							
Time to fall asleep							
Times awake							
Get up time							
Total hours							
Nº caffeine							
Nº alcoholic drinks/time							

(West & Egger, 2017)

Epworth sleepiness scale

Estimate level of daytime sleepiness



(Johns, n.d.)

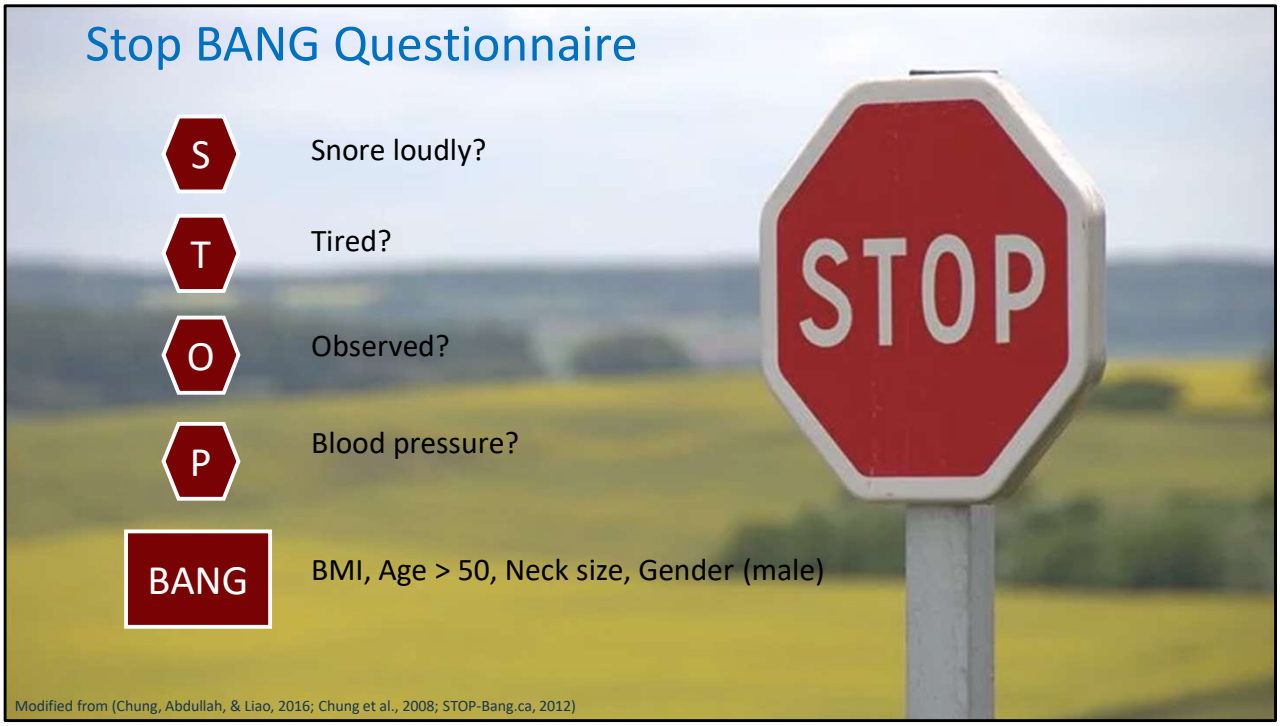
Situation	Chance of sleeping or dozing
Watching TV	
Sitting inactive in a public place	
Being a passenger in a car for > 1 hour	
Lying down in the afternoon	
Sitting and talking to someone	
Sitting quietly after lunch (no alcohol)	
Stopping for a few minutes while driving	
Total Epworth Score	

0 = never doze or sleep
1 = slight chance
2 = moderate chance
3 = high chance

Score
0-10 = normal healthy adult
11-14 = mild sleepiness
15-17 = moderate sleepiness
≥18 = severe sleepiness

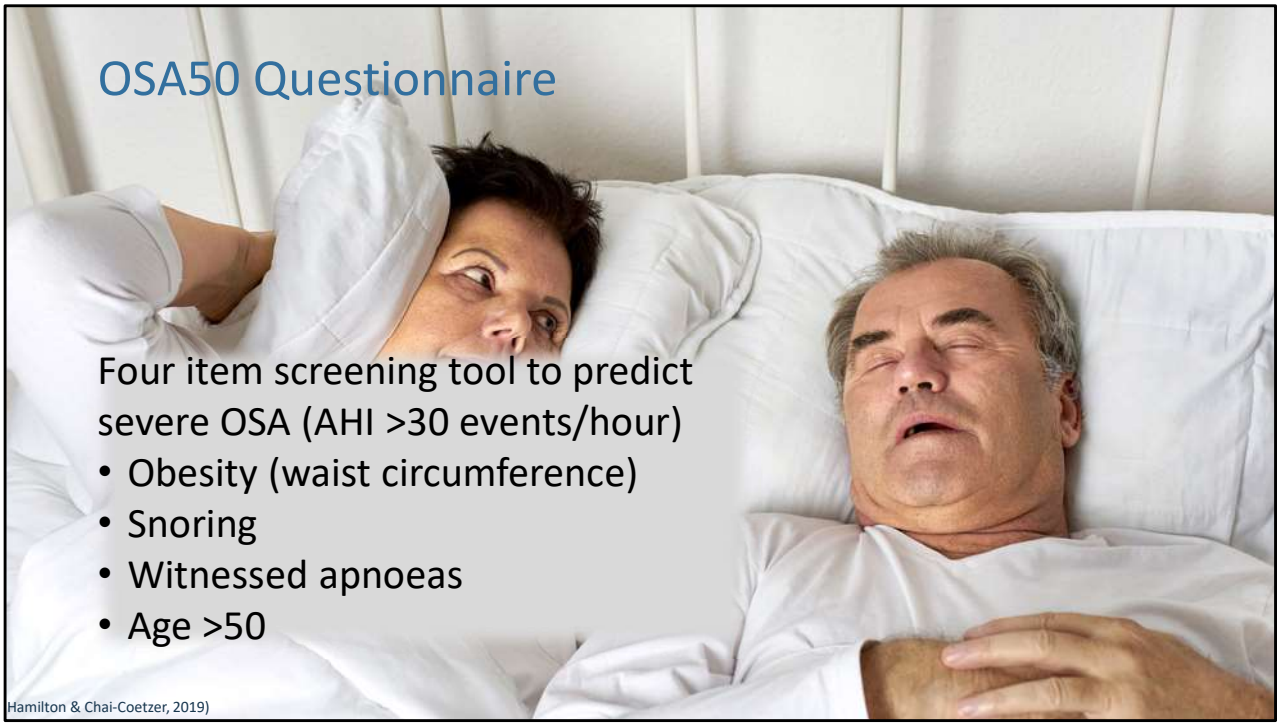
Score of ≥ 11 warrants further investigation

Stop BANG Questionnaire



S	Snore loudly?
T	Tired?
O	Observed?
P	Blood pressure?
BANG	BMI, Age > 50, Neck size, Gender (male)

Modified from (Chung, Abdullah, & Liao, 2016; Chung et al., 2008; STOP-Bang.ca, 2012)



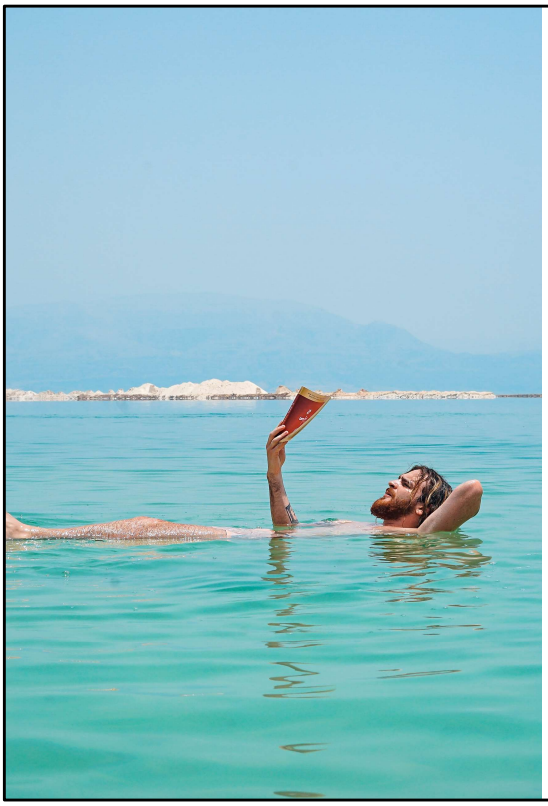
- OSA – obstructive sleep apnoea
- AHI – apnoea hypopnoea index

The OSA50 questionnaire was developed by a group of Australian sleep medicine researchers who aimed to create a brief, four-item OSA screening tool for use in general practice. They established that the four items that best predicted a diagnosis of severe OSA (i.e. AHI ≥30 events/hour) were:

- obesity (by waist circumference)
- snoring
- witnessed apnoeas age ≥50 years.

Weightings from results of logistic regression analyses were used to create a simple screening tool with a maximum score of 10 points. An OSA50 score ≥5 points was found in a validation sample to have 94% sensitivity, with 31% specificity for identifying moderate-to-severe OSA. OSA screening questionnaires at recommended cut-off points tend to have high sensitivity but poor specificity (Table 2); in other words, while the majority of patients who have OSA will screen positive, there will be a large number of false-positive results. Therefore, screening questionnaires alone are inadequate for confirming a diagnosis, and patients who have a positive screening test should proceed to further evaluation with formal sleep study testing to confirm the presence or absence of OSA.

Strategies to assist in reducing stress



Stress management for better sleep

Revise work schedule

- Increase breaks during day
- Increase down time away from work
- Increase social and non work activities
- Increase social support at work

Review lifestyle activities

- Increase physical activity
- Reduce caffeine, alcohol, smoking
- Meditation/breathing exercises
- Increase light exposure in morning

Brain breaks during the day
Revise work schedule
Reduce caffeine intake
Avoid known sleep poisons – alcohol and smoking
Meditation and or breathing exercises
Problem solving activities (during day)
Increase physical activity
Increase time away from work – increase social and non work activities
Increase light exposure in the morning

Describe strategies to assist in enhancing sleep

(sleep hygiene)

Sleep hygiene

Block out the light, keep the room cool (18°C) & quiet

1

Get the environment right

Keep all technology & the dog out of the bedroom

2

Keep the bedroom for sleep and sex only

3

Be sufficiently physically active during the day

Be consistent in your sleep routine

4

Have a regular going to bed & getting up time & start winding down an hour before bed

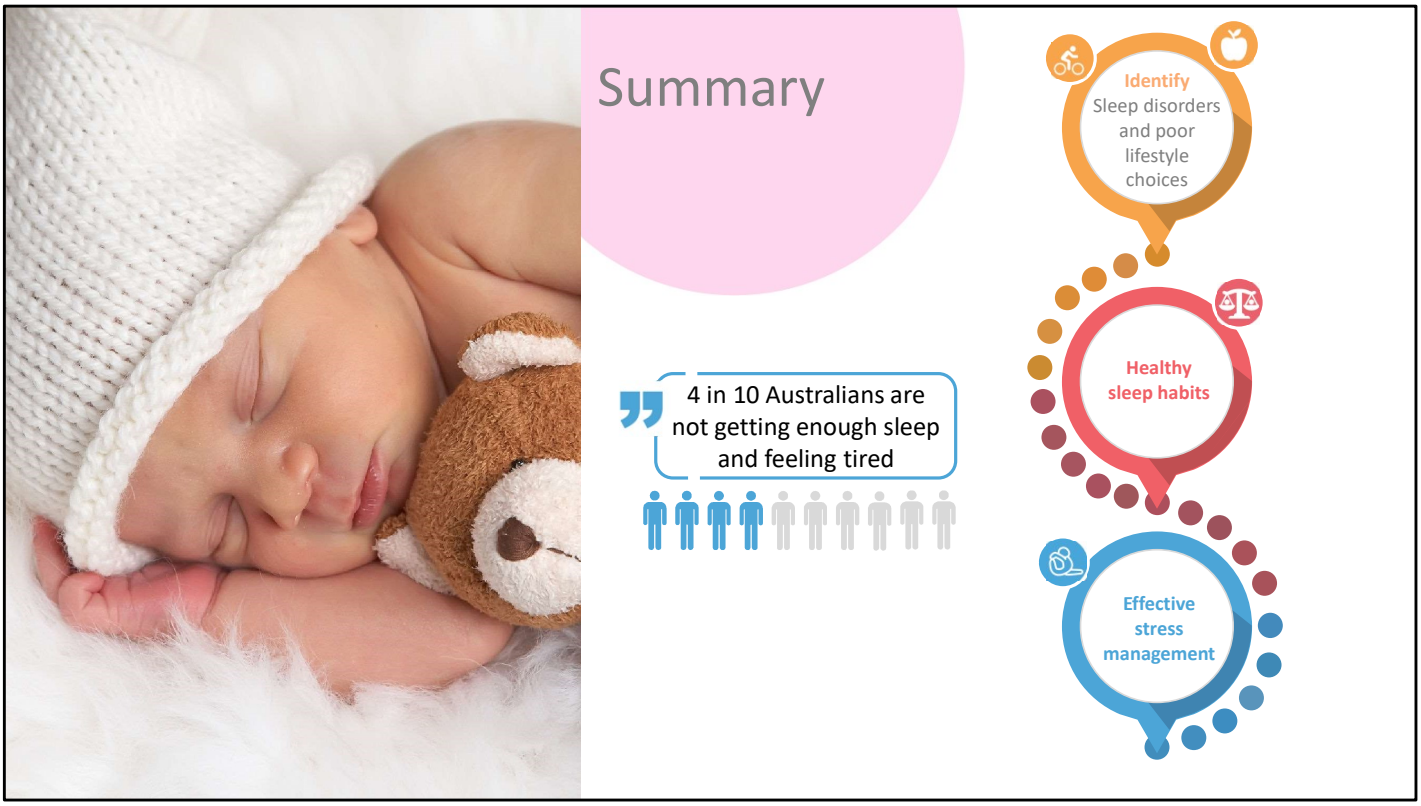
Avoid caffeine after lunchtime & alcohol within 3 hours of bed

5

Relax

6

A pre-bed routine to unwind by journaling, a gratitude journal, meditating or reading



With 4 in 10 Australians not getting enough sleep and feeling tired as a result being able to distinguish between sleep disorders and poor lifestyle choices is the first step to establishing healthy sleep habits and effective stress management

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