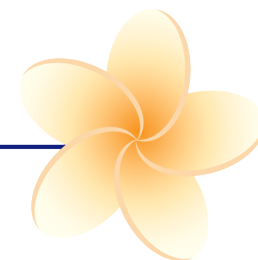
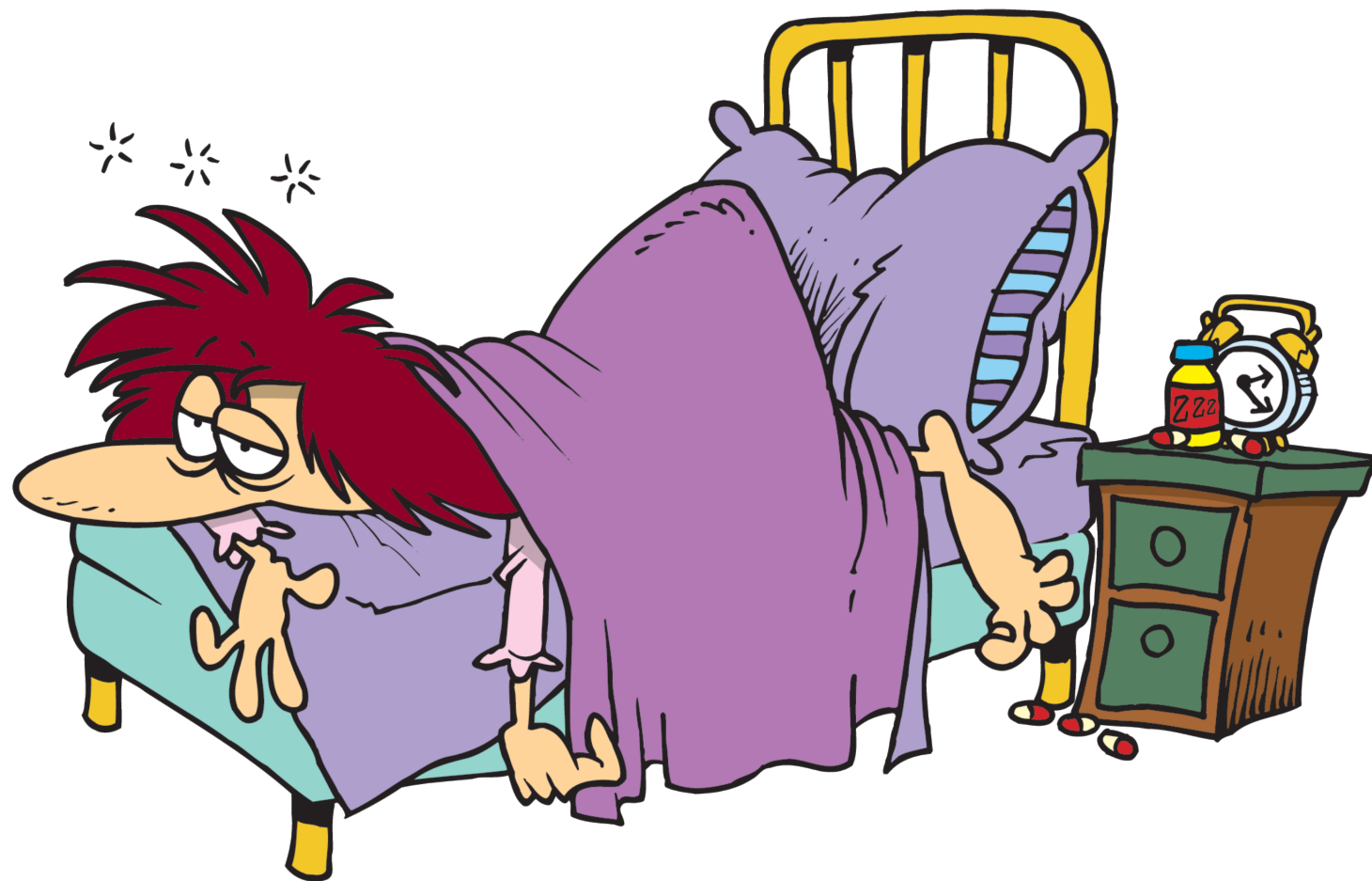




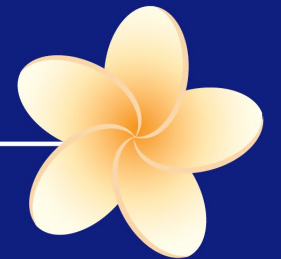
# The Healing Power of Sleep

DR Judith Reddrop, MB BS DRCOG  
Women's Wellbeing, Greenslopes





Amazing things which happen  
to you when you sleep!



# Hormones released in the brain during sleep

## Growth hormone:

### > Essential for growth and tissue repair

- Produced in the pituitary gland (in the brain)
- Released during sleep

## Antidiuretic hormone (ADH):

### > Prevents the production of dilute urine

- Produced in the pituitary gland (in the brain)
- Levels of ADH increase during sleep

## Melatonin:

### > Signals to the body that it is time to sleep

- Produced in the pineal gland (in the brain)
- Released with increased darkness

## Oxytocin:

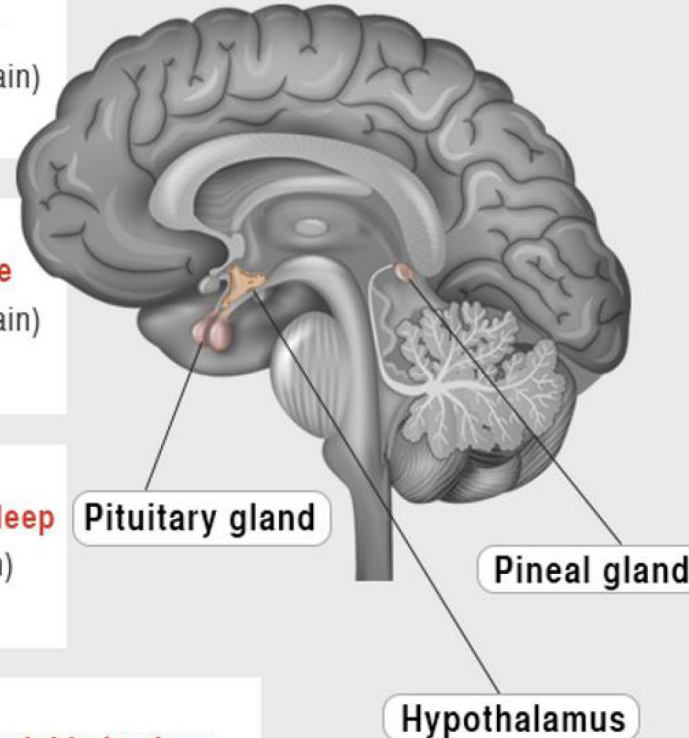
### > Involved in childbirth, lactation and social behaviour

- Produced in the hypothalamus (base of the brain)
- Levels peak after 5 hours of sleep
- Levels may influence the content of dreams

## Prolactin:

### > Involved in over 300 functions including lactation, metabolism and immune system regulation

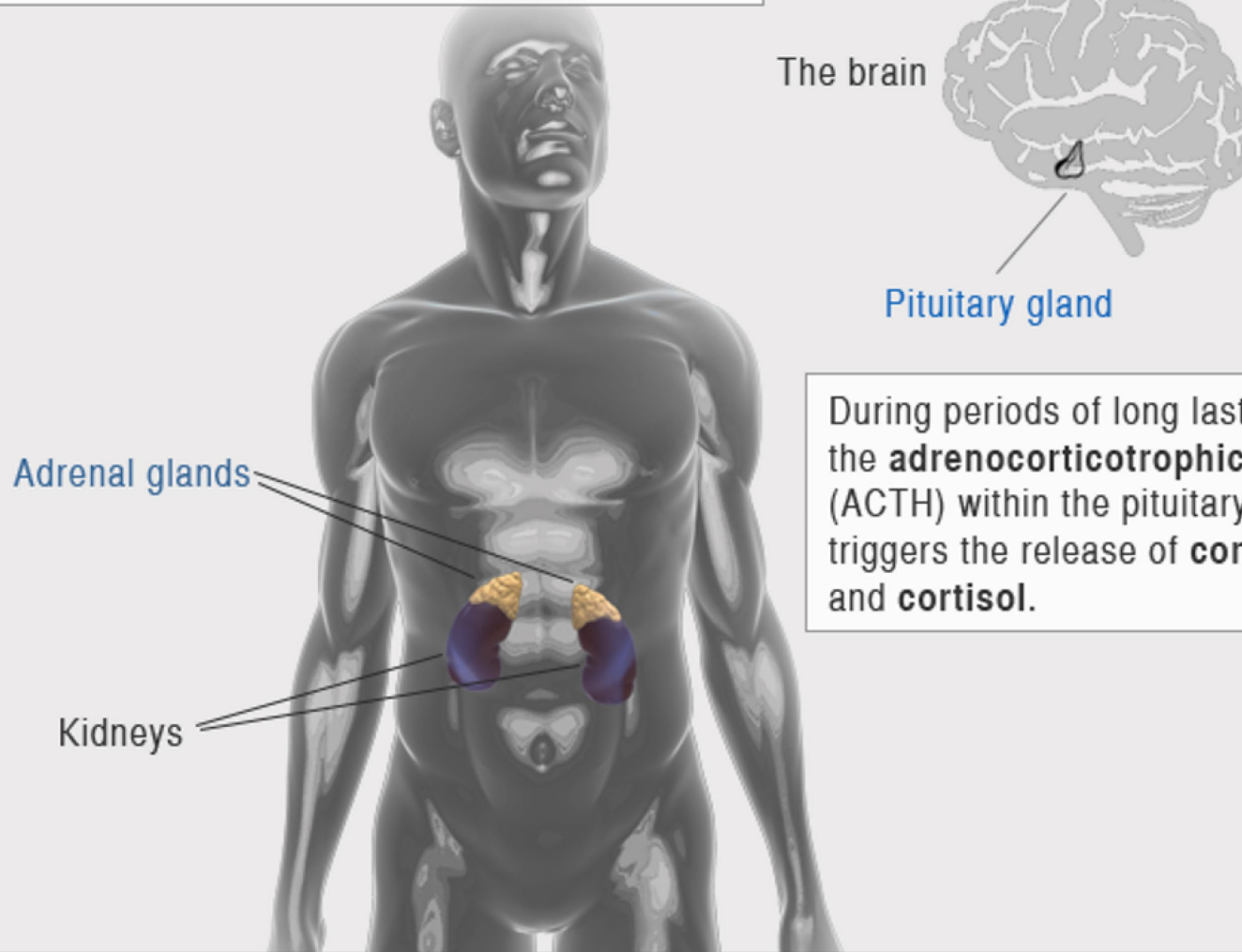
- Produced in the pituitary gland
- Levels are higher during sleep than in daytime



# Hormones, stress and sleep

How hormones affect sleep through our stress levels

The **adrenal glands**, located just above the kidneys, produce hormones that are related to stress such as **adrenaline**, **cortisone** and **cortisol**.



During periods of long lasting stress, the **adrenocorticotrophic hormone (ACTH)** within the pituitary gland triggers the release of **cortisone** and **cortisol**.

# Benefits of Sleep

- Reduces inflammation
- Rejuvenates the immune system
- Promotes cytokine release
- Resets body clock
- Modulates appetite
- Promotes growth and repair
- Creation of long term memories



# Insomnia

- Sleep disturbance
- Difficulty falling asleep
- Difficulty staying asleep
- Unrefreshing sleep
- Incidence: 60% of cancer patient population



# Common Causes of sleep disturbance

- Psychosocial
- Environmental
- Medical Conditions eg: CVD, OSA, GORD, Chronic Pain
- Psychiatric
- Substance Use
- Medicines





# Exacerbating factors

- Pain, nocturia
- Worrying, anxiety, depression
- Exercise restrictions
- Side effects of drugs & chemotherapy

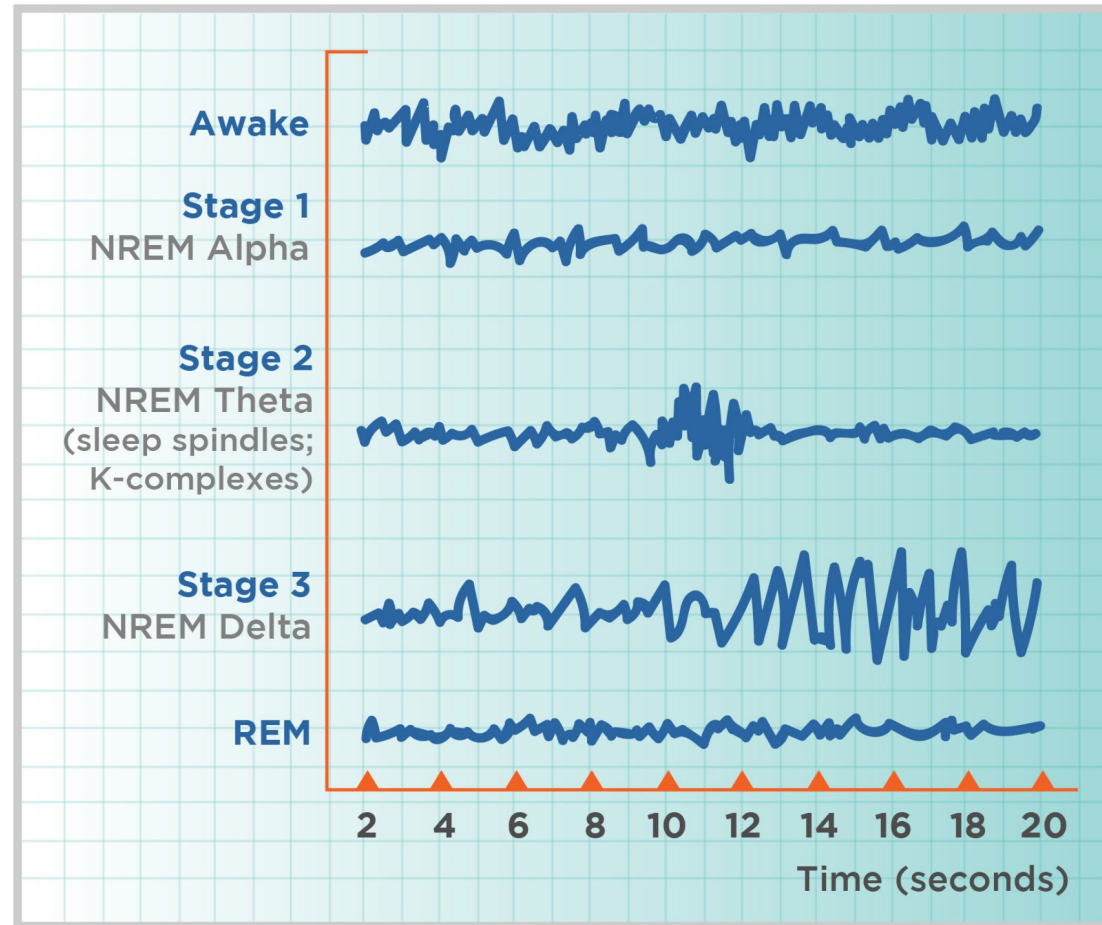


# How to improve quality and quantity of sleep

- Lifestyle factors
- Sleep hygiene measures – list of measures will be provided
- Relaxation Techniques
- Meditation
- Hypnotherapy



## EEG RECORDINGS DURING SLEEP



# Medications

## Herbal

- eg: lavender, valerian

## Neurotransmitters

- eg melatonin (Circadin SR 2mg) Serotonin (SSRI's)

## Benzodiazopines

- eg: temazepam, oxazepam
- Others eg: zolpidem (Stillnox)



# Cognitive Behavioural Therapy

- Suitable for people with negative beliefs and attitudes, unrealistic expectations, or who are excessively worried about sleep and the consequences of sleep loss.



# Peter MacCallum Cancer Centre Victoria

- Research into causes of sleep disturbance
- CAN-Sleep program:
- Medical/psychological assessment
- CAN-Sleep booklet
- CBT Cognitive Behavioural Therapy



# Where do I go from here?

**Step 1:** See GP to talk about sleep issues

**Step 2:** Exclude other treatable causes of insomnia. Eg. \*OSA may require CPAP and see respiratory physician, \*ENT check if upper airways obstruction, \*Mood assessment in case signs of anxiety or depression

**Step 3:** Read CAN-sleep booklet

**Step 4:** Start restricting sleep window



# Where do I go from here?

## Outcome

- Improvement of 50% measured using booklet and sleep window technique





# If insomnia persists, report back to GP

- Group CBT therapy over 4 sessions: effective and manageable
- GP Mental Health Care Plan: Medicare rebate

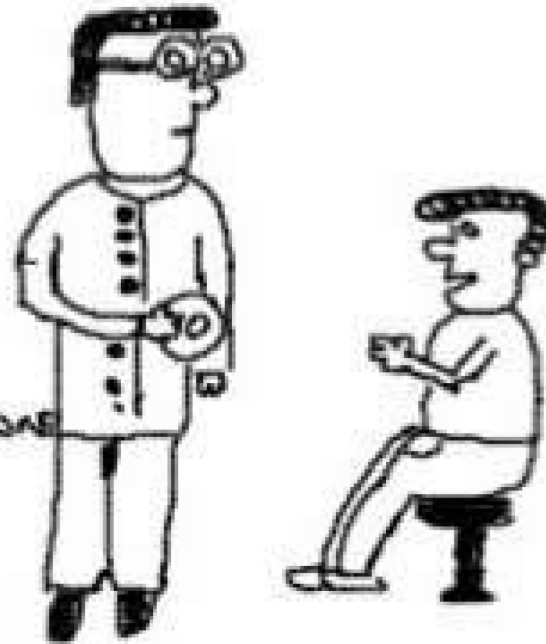
## Take –home message

- Be proactive
- Involve your GP
- Look forward to refreshing nights sleep!



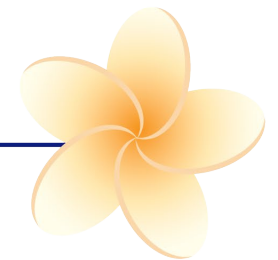
SLEEPING DISORDER?

TRY  
THESE  
POWER  
POINT  
PRESENTATIONS



Brainstorming.com

•PPT- MAKING PEOPLE SLEEP.  
SINCE 1996...



# Resources and references

- Handouts available at coffee break





women's wellbeing  
a general practice for women

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631 Logan Road, Greenslopes

[womenswellbeing.com.au](http://womenswellbeing.com.au)