



# Fatigue management for supervisors

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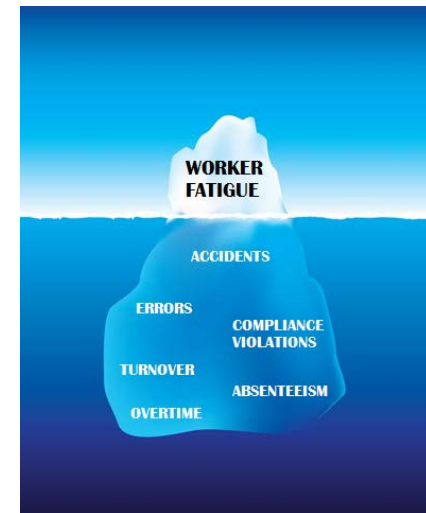


## ◀ Definition

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## ◀ Fatigue

“A state of **impaired mental and/or physical performance** and **lowered alertness** arising as a result or combination of **hard physical and mental work, health and psychosocial factors** or **inadequate restorative sleep**”





## ◀ Facts

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# Impact of fatigue

## 1. Poor Concentration

Sleep deprivation (hrs)	Blood Alcohol Concentration
17 to 19	0.05
18 to 20	0.1

## 2. Poor Health

- Depressed Mood
- Overweight
- Lack of Energy
- Physical Affect

**= IT WILL AFFECT YOU !**

## ◀ Costs of Fatigue?

- ▶ Fatigue costs the UK £40billion per year, of which £115-£240 million related to workplace incidents
- ▶ 200,000 lost working days per year
- ▶ Driver fatigue contributes to 20% - 30% of private vehicle deaths and 20% of rail accidents



## ◀ Clapham junction rail crash 1988

- ▶ A multiple train collision
- ▶ Thirty-five people died
- ▶ Five hundred people were injured.
- ▶ Faulty signalling connection
- ▶ The signalling technician responsible had worked a seven day week for the previous thirteen weeks.





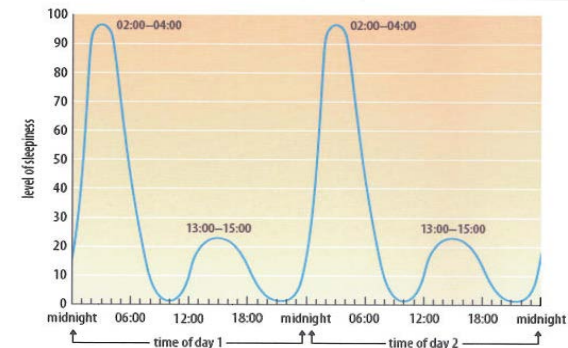
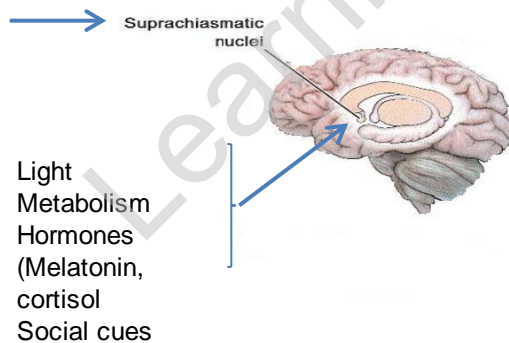
## ◀ Health effects

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## ◀ Circadian Rhythm

- ▶ The Internal Body Clock: All living things regulated by 24 hour biological rhythms
- ▶ Time cues prime us for activity in the day, sleep at night. Most significant is exposure to light
- ▶ Sleepiness between midnight and 6am. Peaks 2am to 4am
- ▶ Smaller peak 1pm to 3pm



## ◀ Short term health effects

- ▶ Physical – blood shot eyes, slowed movements, poor co-ordination, slow responses
- ▶ Cognitive – difficult to concentrate, make clear decisions, take in and act on information, more frequent lapses of attention or memory, react more slowly, make more errors
- ▶ Emotional – depressed mood, irritable, frustrated





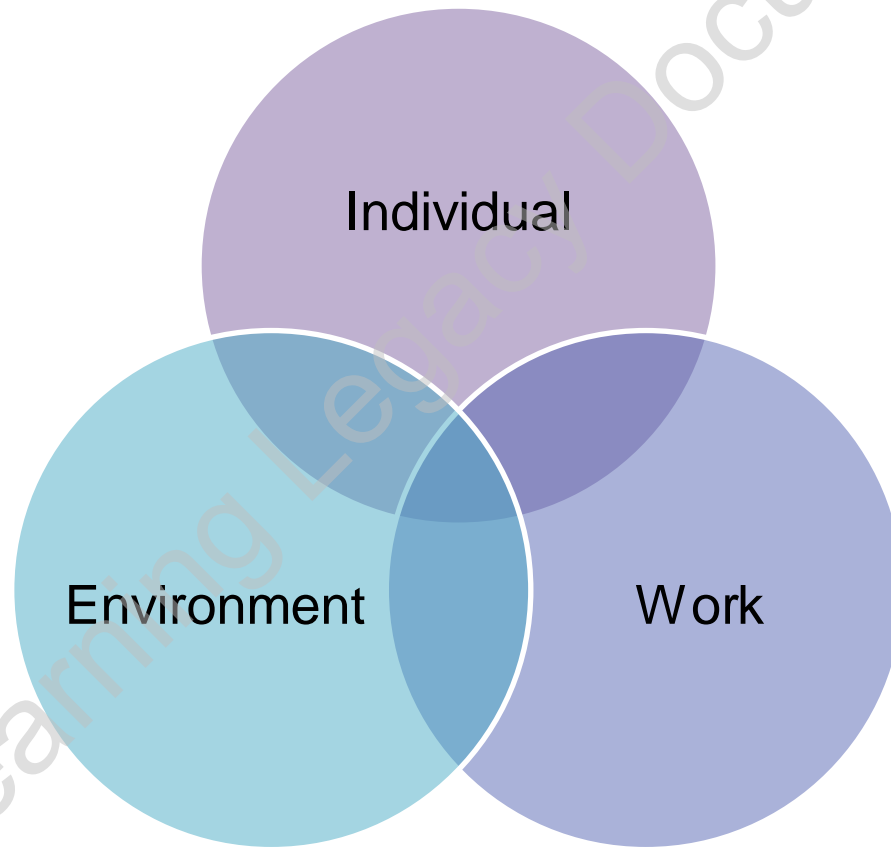




## ◀ Fatigue assessment

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## ◀ Causes of fatigue



## ◀ Individual causes

- ▶ Circadian rhythm
- ▶ Health conditions
- ▶ Sleep quality
- ▶ Lifestyle
  - ◆ Poor Diet
  - ◆ Poor Hydration
  - ◆ Excessive Alcohol
  - ◆ Excessive/ timing of caffeine
  - ◆ Lack of Exercise outside of work
  - ◆ Depressed Mood eg relationships, injury etc
- ▶ Other factors



Individual

## ◀ Work causes

- ▶ Long daily work hours
- ▶ Concentrating for extended periods
- ▶ High risk activities
- ▶ Shiftwork
- ▶ New at job or skill
- ▶ Working alone
- ▶ Being on call
- ▶ Working night shift




Work



## ◀ Work environment causes

- ▶ Insufficient breaks
- ▶ Not using breaks effectively
- ▶ Noise, vibration and heat
- ▶ Repetitive or boring tasks
- ▶ High physical and/or mental exertion



Work  
Environment

## ◀ Home environment causes

- ▶ Sleep disruptions – neighbours, family, living in multiple occupancy accommodation
- ▶ Poor sleep habits – late to bed, watching tv
- ▶ Family - illness, new baby
- ▶ Worries – financial or domestic



Home  
Environment



## ◀ Legal requirements

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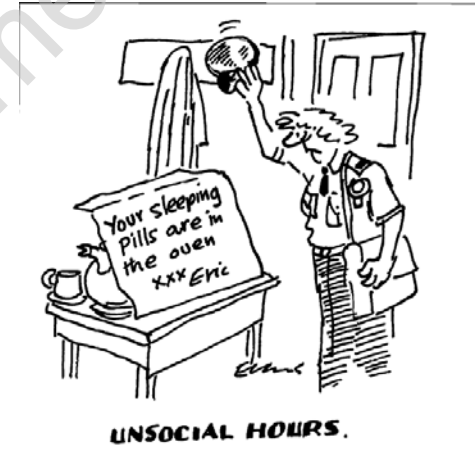
## ◀ Shift Work & the Law

### Working Time Regulations 1998

- ▶ These lay down minimum legal requirements in how to organise working time. The key requirements are:-
  - a limit of an average of 48 hours a week which a worker can be required to work (though workers can choose to work more if they want to);
  - for night workers, a limit of an average of 8 hours work in each 24-hour period;
  - a right for night workers to receive free health assessments;
  - a right to 11 hours consecutive rest a day;
  - a right to a day off each week;
  - a right to a rest break if the working day is longer than six hours;
  - a right to four weeks' paid leave per year.
  
- ▶ There is also provision in the regulations to opt out of the 48 hours a week limit for a number of industries and roles

## ◀ Shift Work & the Law

- ▶ Health & Safety at Work Act (HSWA)
- ▶ Management of Health & Safety at Work Regulations (MHSWR' s)
- ▶ As well as the specific duties in the WTR' s, there are general duties in the above to protect the health & safety of employee' s as far as reasonably practicable. This includes conducting risk assessments and implementing control measures for all relevant risks.
- ▶ Shift working is accepted as introducing additional health and safety risk into the workplace and therefore needs to be covered.





## ◀ Sleep

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## ◀ The Modern Epidemic

- ▶ For thousands of years, people:
  - ◆ Worked during the day
  - ◆ Slept at night
  - ◆ 365 days a year
  - ◆ In the same time zone
- ▶ Today
  - ◆ Electric light bulbs
  - ◆ Rapid jet travel
  - ◆ 24/7 society



**BUT** humans have remained the same

# ◀ We spend a third of our lives doing it.... So why do we sleep?

- ▶ Restore bodies energy supply
- ▶ Repair work
- ▶ To combat fatigue





## ◀ Myths about sleep

- ▶ It is easy to tell when lack of sleep is starting to affect performance
- ▶ Alcohol is a good cure for sleep difficulties
- ▶ People can train themselves to get by on less sleep
- ▶ Once sleepiness is noticed, it is possible to force increased alertness

**FALSE**

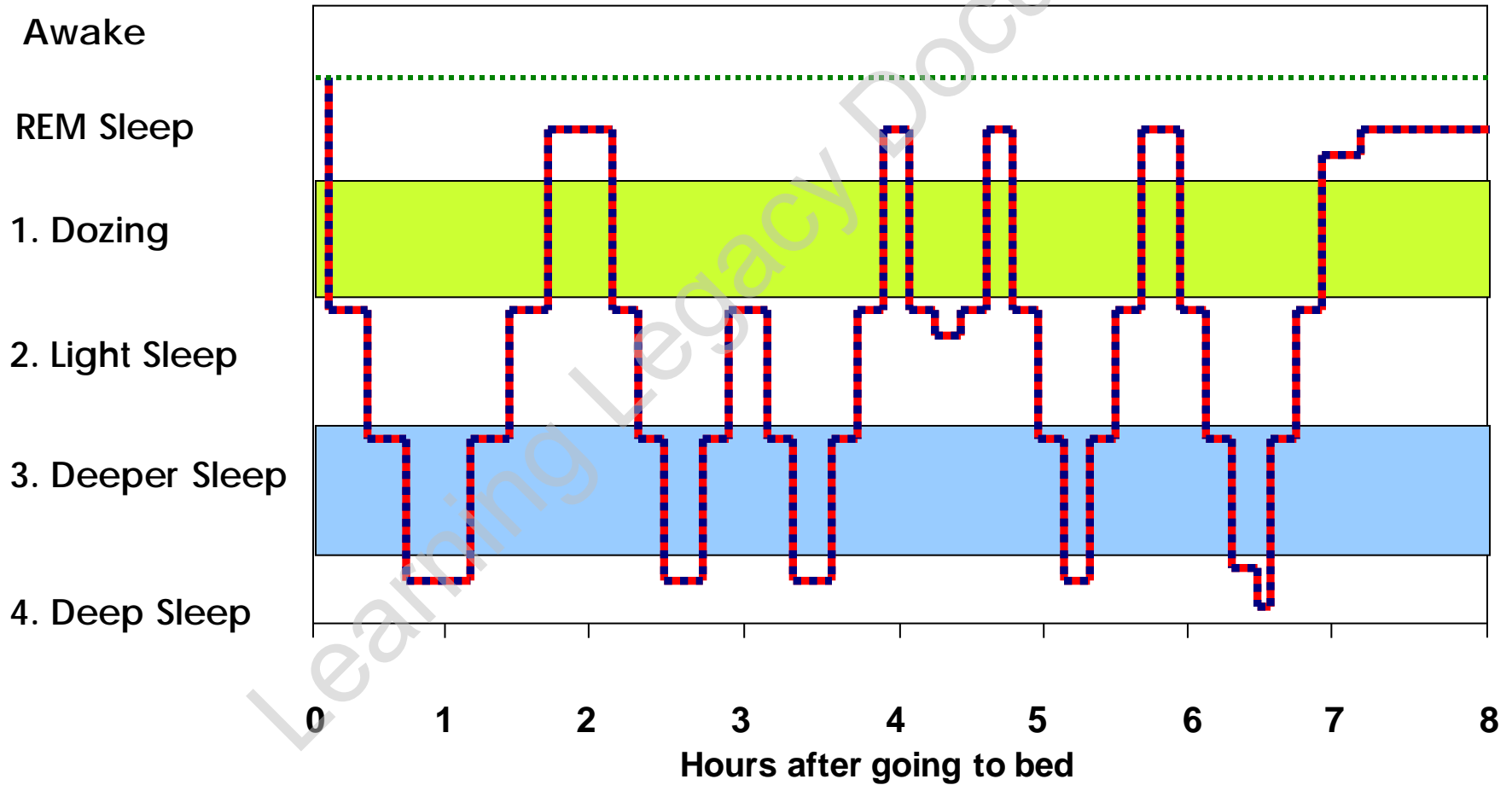
## ◀ Sleep Stages

**During an 8 hour period most people have five  
90 minute sleep cycles**

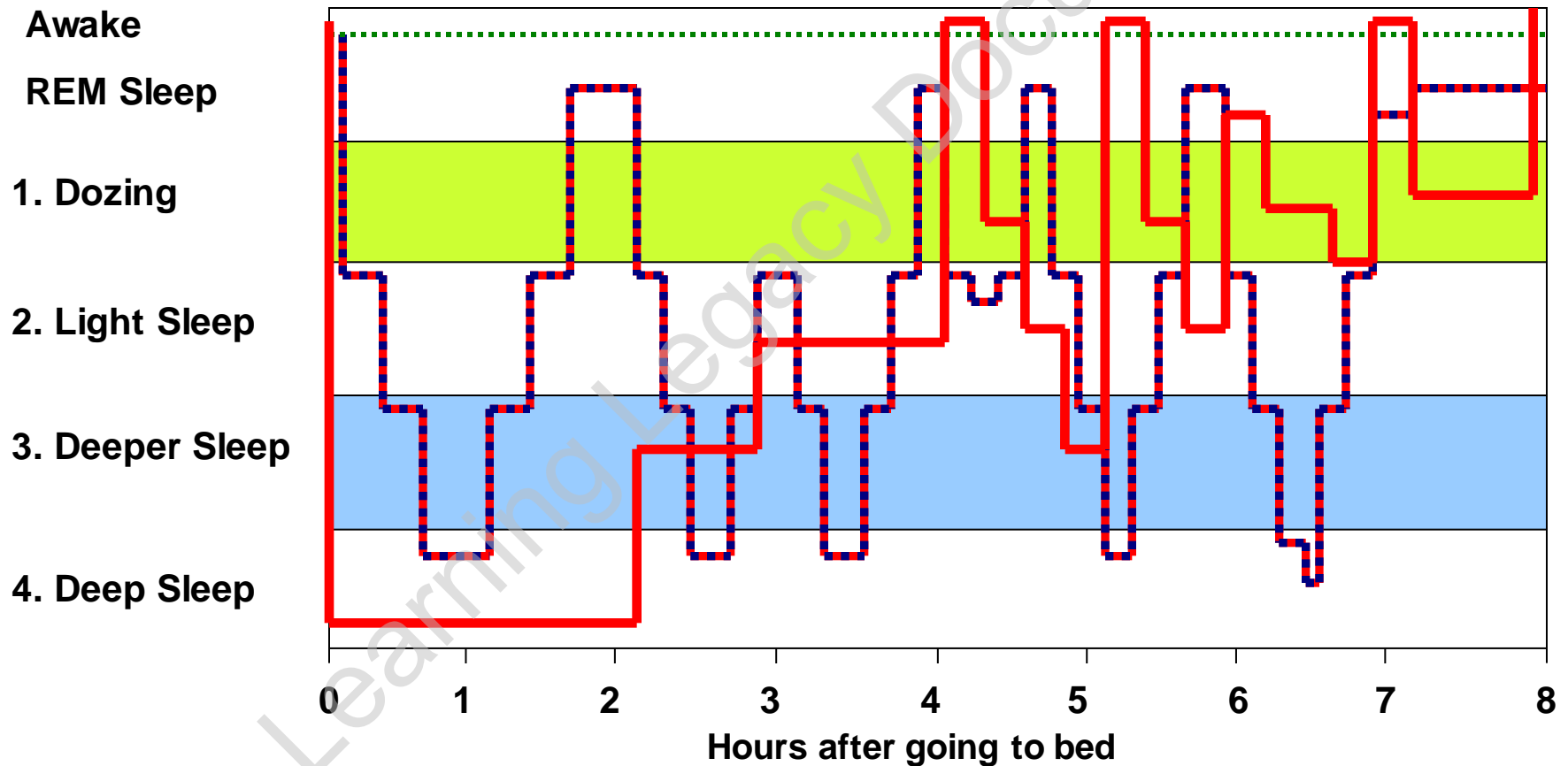
- ▶ Stage 1: Drowsiness
- ▶ Stage 2: Light sleep
- ▶ Stage 3: Deep sleep
- ▶ Stage 4: Deep sleep (more intense)
- ▶ REM: Dream sleep



## ◀ Healthy sleep

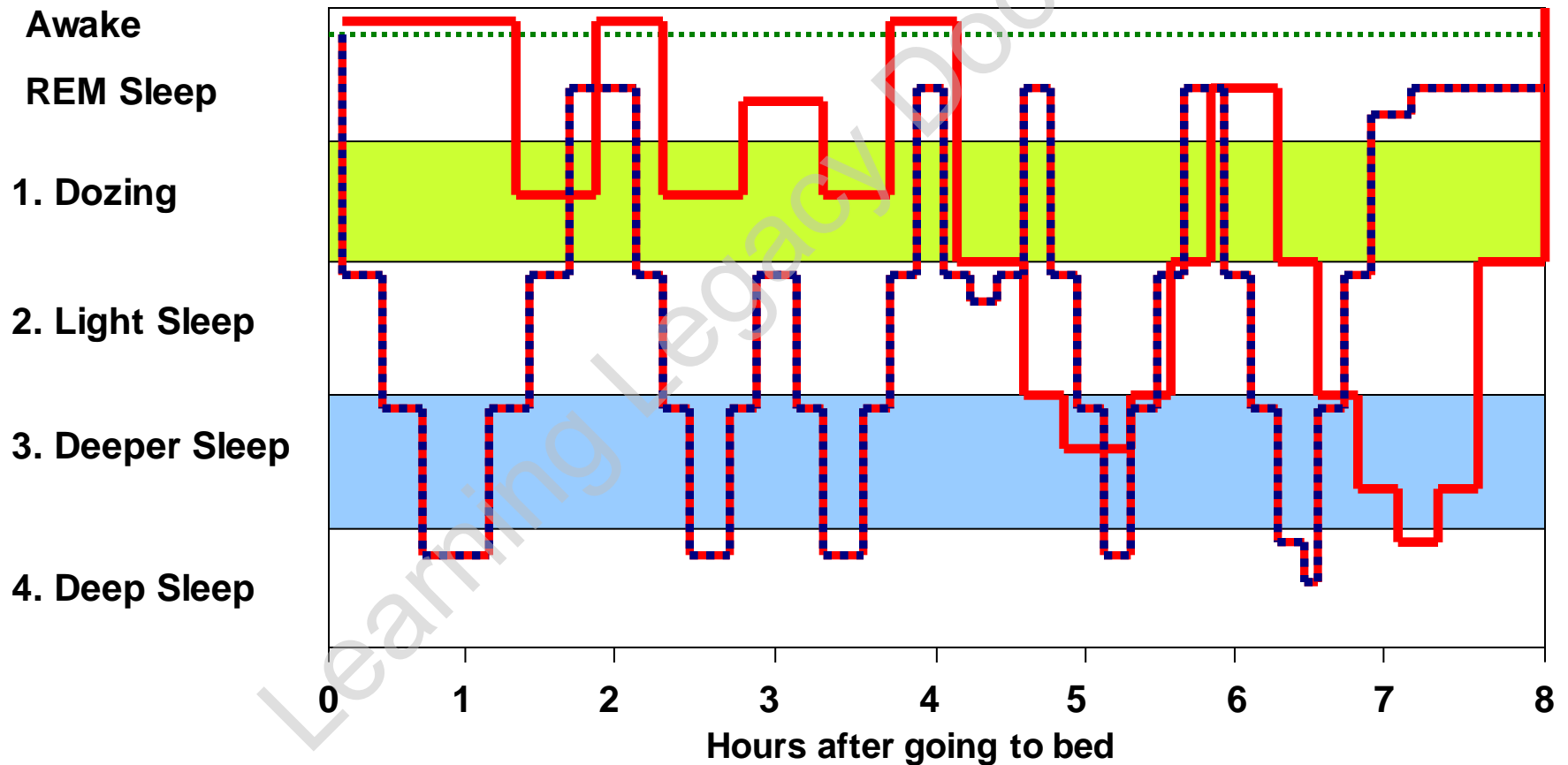


## ◀ Alcohol induced sleep



**It only takes 2 standard drinks (20g alcohol)**

## ◀ Caffeine stimulated sleep



## ◀ How much sleep?

- ▶ Sleep plays an important role in our overall health
- ▶ Ideally 7-9 hours of good sleep each night
- ▶ Alternatively 6 hours of good sleep + naps (8/24 hrs)
- ▶ Some people may need only 6 while others prefer 9
- ▶ Research shows that women who sleep only 5 hours were at 45% higher risk of heart disease.

**The irony is getting less sleep, to get more done, makes people far less productive**

## ◀ Improving fatigue

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## ◀ Fatigue fighting foods

**Avoid the insulin crash Zone!**

- ▶ Avoid refined and quickly digested sugars; i.e. those high in GI
- ▶ Eat low GI foods: wholegrain breads  
Pasta, oats, apples, apricots, oranges,  
yoghurt, milk
- ▶ Eat more protein – it keeps your energy up and your hunger at bay





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# ◀ What gives us energy?

**Movement**

**Eating**

**Hydration**

**Sleeping**



**I WILL\***

• have more energy



## ◀ Move more – improve alertness

- ▶ Move your major muscle groups every 60-90 minutes
- ▶ Get up and walk round whenever possible
- ▶ Plan more stimulating work at times you feel most drowsy
- ▶ Keep in contact with co-workers to help keep alert

Start an exercise plan to get fitter

- ▶ Plan a schedule that accounts for your work/shift schedule
- ▶ A light walk when you get home may help you to relax for better sleep
- ▶ Use physical activities to help you to focus on ‘family time’



## ◀ Exercise Effect

**Reduces fatigue and increases energy levels**

Exercise Level	Fatigue Level	Energy Level
Sedentary	Persistent fatigue (25% of population)	
Low level exercise 20mins, 3 x week	65% reduction in fatigue	20% improved
Moderate level exercise 20mins, 3 x week	49% reduction in fatigue	20% improved

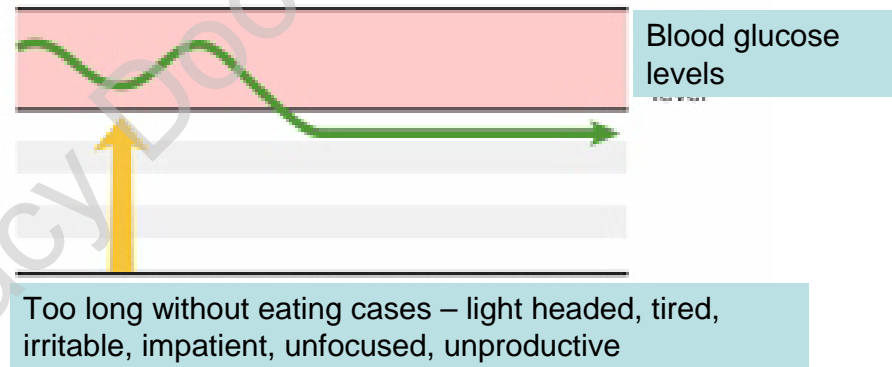
**A 20 minute walk 2-3 times per week helps!**

## Eat within 1 hour of waking



Studies show that people who eat breakfast report:  
Being in a better mood and having more energy throughout the day.

## Eat every 3 hours



Any imbalance to the supply of glucose to the body...

- |                 |                    |
|-----------------|--------------------|
| Fatigue         | Digestive upset    |
| Mood changes    | Dizziness          |
| Insomnia        | Irritability       |
| Excess sweating | Poor concentration |
| Forgetfulness   |                    |

# ← Eat well

Breakfast		
<p><b>Sugary fortified cereals</b>  <b>White toast / Jam</b>  <b>Pastries</b>  <b>Tea / Coffee</b>  <b>Sweetened yoghurt</b>  <b>Fried breakfast</b></p>	<p><b>Vs</b></p>	<p><b>Muesli</b>  <b>Porridge</b>  <b>Natural Yoghurt</b>  <b>Fresh FruitVs</b>  <b>Fresh pressed juices</b>  <b>Boiled or poached eggs</b></p>
Lunch		
<p><b>White bread</b>  <b>Little filling in sandwich</b>  <b>Sausage roll</b>  <b>Chips and burger</b>  <b>Cake</b>  <b>Crisps</b>  <b>Chocolate bars</b>  <b>Fizzy drink</b></p>	<p><b>Vs</b></p>	<p><b>Brown bread</b>  <b>Lots of salad in sandwich</b>  <b>Extra salad in tub</b>  <b>Fruit</b>  <b>Nuts and seeds</b>  <b>Cereal bars</b>  <b>Juice / water</b></p>

## ◀ **Water, water, water!**

- ▶ Water hydration is the most fundamental requirement for human health
- ▶ Proper water intake can increase our bodies performance (mental alertness, increased exercise capacity, decreased fatigue)
- ▶ Approximately 2litres a day (6-8 glasses)
- ▶ Once you feel thirsty you are in the first stages of dehydration
- ▶ Check your urine. Should be clear to pale in colour and you should be urinating every 2-3hrs

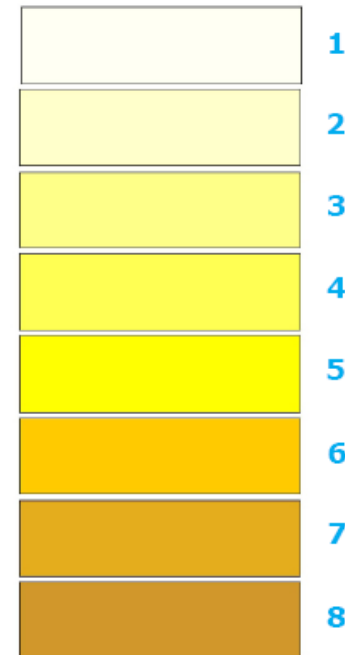
## ◀ Keep hydrated

Side effects of not being adequately hydrated:

- ▶ Drowsiness
- ▶ Headaches
- ▶ Dry skin, eyes or lips
- ▶ Lack of concentration
- ▶ Irritability

Check the colour of you pee every time you go to the toilet

Healthy pee is 1 to 3,  
4 to 8 you must hydrate!





## ◀ Sleep hygiene

- ▶ Avoid Stimulants
- ▶ Don't over-indulge
- ▶ Suitable bedroom environment
- ▶ Bedtime routine
- ▶ Relaxing routine
- ▶ Set a regular bedtime and wake-time schedule
- ▶ Plan your sleep sensibly
- ▶ Don't lie in bed worrying about getting to sleep
- ▶ Deal with worries by making a list
- ▶ Don't watch the clock by the bed
- ▶ Try to get up at the same time every morning
- ▶ Avoid exercising too close to bedtime





## ◀ **Managing Fatigue – Your Checklist !**




- ▶ Talk with your supervisor re: your work tasks
- ▶ Use your breaks effectively
- ▶ Drink Plenty of water during the day e.g. minimum 2 litres
- ▶ Diet – 5 small meals throughout the day
- ▶ Exercise outside of work e.g. Minimum 2x /week
- ▶ Sleep – 8hrs of good quality sleep
- ▶ Alcohol – more than 2 x standard drinks affects your sleep
- ▶ Caffeine – not less than 10hrs before you sleep
- ▶ Outside work Interests – Do something outside of work you love

**BE PROACTIVE – IF IT IS TO BE, IT'S UP TO ME .....**

## ONE YOU

CHECKING SMOKING DRINKING EATING MOVING **SLEEP** STRESS MORE TOPICS OFFERS APPS FOLLOW ONE YOU  

# SLEEP

SHARE   

### HOW MUCH SLEEP DO YOU NEED?


Most of us need around eight hours of good-quality sleep a night to function properly – but some need more and some less. What matters is that you find out how much sleep you need and then try to achieve it.

Good-quality sleep is more important than the amount of sleep that you get and it helps to keep you feeling healthy.

### SLEEP AND YOU

The odd bad night's sleep can make you feel tired and irritable the next day, but it won't harm your health.

However, regular poor-quality sleep can have a huge effect on your health, putting you at risk of developing serious medical conditions and can affect your body, thoughts, emotions and behaviour.



### HOW ARE YOU?

Our lifestyles can be more unhealthy than we think. Start the fight back to a healthier you. Take the One You quiz and see how you score.

**START QUIZ**

### DID YOU KNOW?

Sleeping well can help boost your immune system and help you fight off illness.

HOW ARE YOU? QUIZ

## Sleepio

YOUR SLEEP SCORE

### How would you like to improve your sleep?

Select all that apply

- Get to sleep more easily
- Sleep right through the night without waking up
- Stop waking up too early
- Wake up feeling refreshed
- None of the above

SELECT 1 TO CONTINUE

## ◀ Fatigue monitoring

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## ◀ SYMPTOMS

- ▶ Chronic tiredness or sleepiness
- ▶ Headache
- ▶ Dizziness
- ▶ Sore, aching or muscle weakness
- ▶ Heavy eyes
- ▶ Slowed reflexes and responses
- ▶ Impaired decision making and judgement
- ▶ Hallucinations
- ▶ Appetite loss
- ▶ Low motivation



## ◀ SIGNS

PHYSICAL
Yawning
Heavy Eyelids
Eye-rubbing
Head drooping
Micro sleeps

MENTAL
Difficulty concentrating on a task
Lapses in attention
Difficulty remembering what you are doing
Failure to communicate important information
Failure to anticipate events or actions
Accidentally doing the wrong thing (error)
Accidentally not doing the right thing (omission)

EMOTIONAL
More quiet than usual
Lacking energy
Mood changes, decrease tolerance
Emotional outburst, aggressive, rage

