



Shift Working at





Agenda

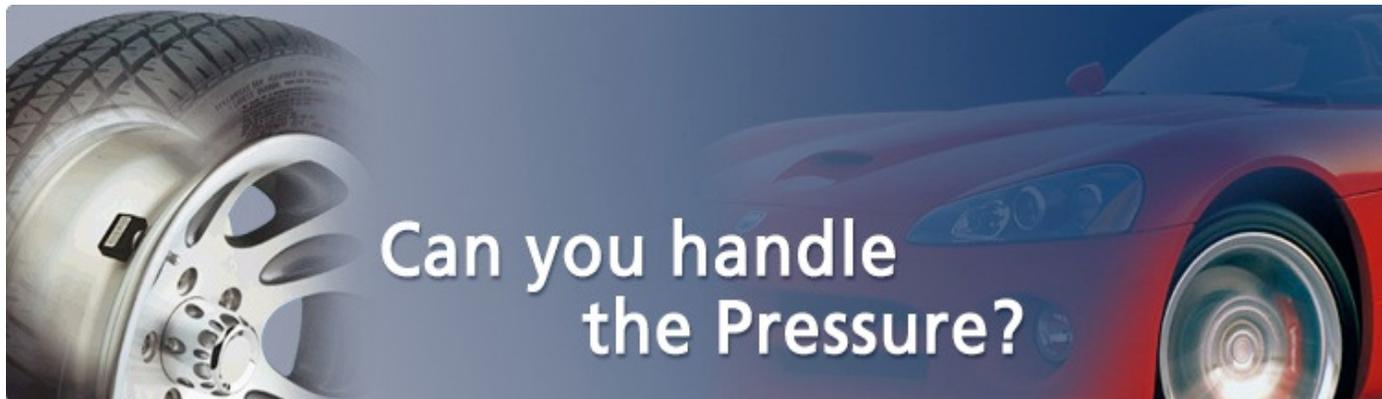


- ▶ **Who are Schrader?**
- ▶ **Scheduling Shifts**
- ▶ **Shift work fundamentals**
- ▶ **Shift working life style training**



▶▶

Overview of Schrader Electronics



Schrader

- ▶▶
- ▶ SEL is the market leader in the production of remote tyre pressure monitoring systems.
- ▶ Currently employ approx 1140 employees worldwide.
- ▶ Three manufacturing facilities – Antrim, Carrick and Springfield.
- ▶ 2012 Expect to ship 40 million sensors & 1.3 million receivers
- ▶ Expansion plans for Antrim, Carrick & Springfield





Product Groups

TPMS



Automotive



Heavy Duty/Off-Road



Motorcycles

ASIC



Industrial



Medical Devices



Test & Measurement

New Products



Fuel Level and Quality



Belt & Hose Monitoring



Truck and Bus

Customers

HUMMER



VOLVO



PONTIAC

SAAB



Jeep



FIAT



// Innovation Inside.

SCHRADER



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Shift Schedule



- ▶ **Best work patterns are site specific**
- ▶ **Three critical components (design criteria)**
 - ▶ Operational (business needs)
 - ▶ Physiological (health and safety needs)
 - ▶ Sociological (employee needs and preferences)
- ▶ **Key is to determine each of the above criteria**
- ▶ **Affected employees selected preferred schedule from best alternatives**
- ▶ **Schrader Electronics worked with Circadian Technologies**



Goals and Objectives



- ▶ **Maximise shift worker quality of life**
- ▶ **Maximise health and safety**
- ▶ **Respond to employee scheduling concerns**
- ▶ **Determine the best schedule possibilities that exist**
- ▶ **Include employees in the evaluation process**
- ▶ **Respond to customer demand**



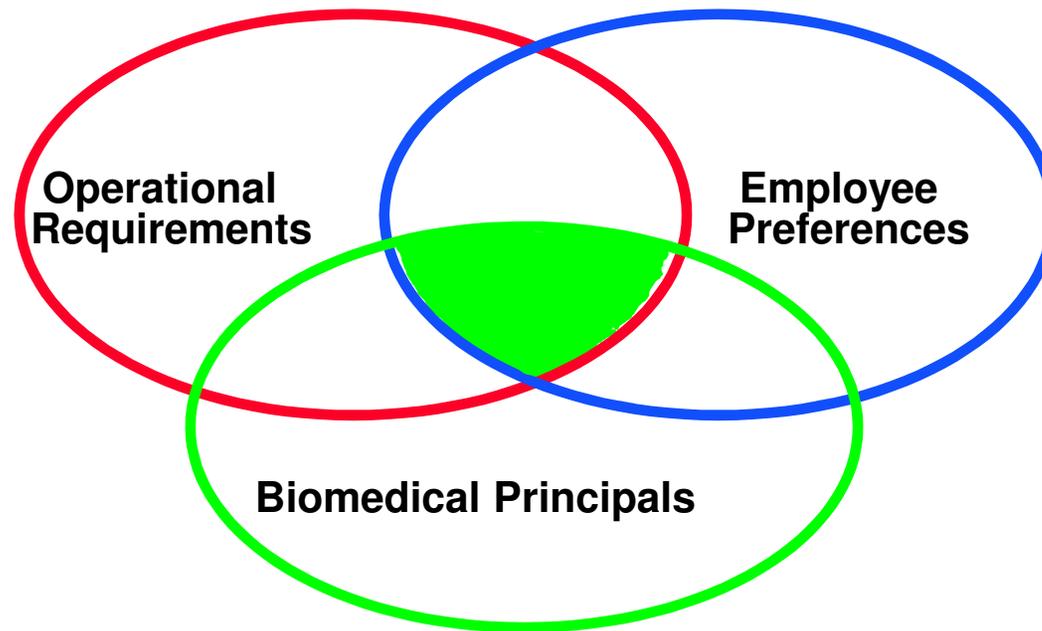
Shift Patterns



- ▶ **Establish business needs/management operating criteria**
- ▶ **Conduct scheduling education sessions**
- ▶ **Administer survey on-site**
- ▶ **Analyse survey results**
- ▶ **Define employee design criteria**
- ▶ **Design schedule options that best fit the criteria & business criteria**
- ▶ **Present best schedule options/pro's and con's/features, etc. to employees**
- ▶ **Employees rank options**
- ▶ **Resolve implementation issues**

Design Considerations

Site Specific Criteria



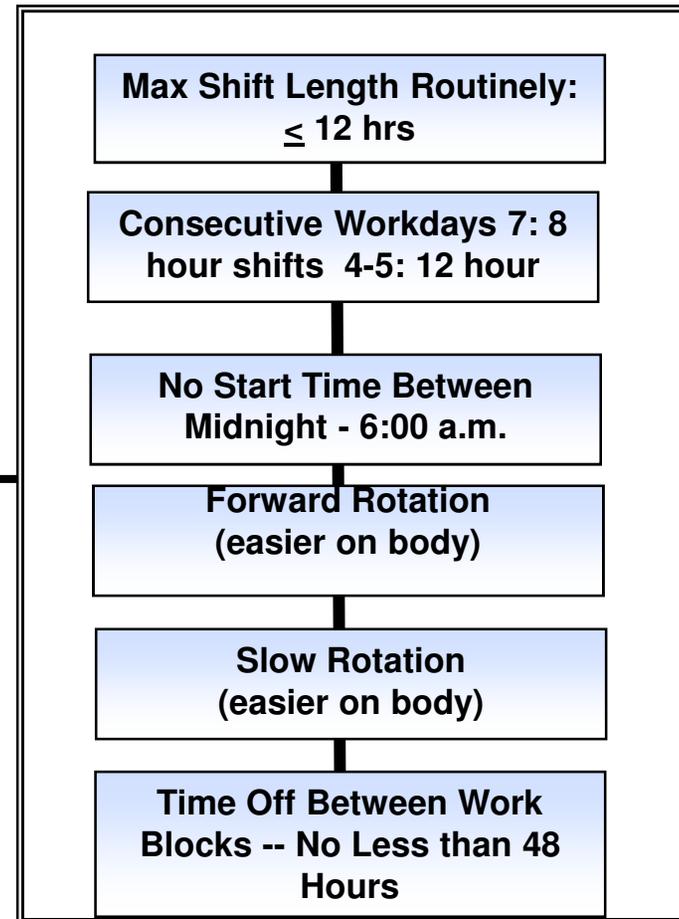
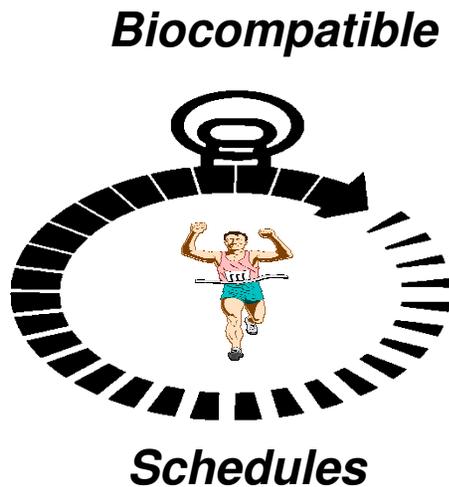


▶▶ *Physiological Design Criteria**

- ▶ **Clockwise rotation is easiest on the body**
- ▶ **Slow rotation speed**
- ▶ **Maximum schedule regularity**
- ▶ **Minimum consecutive shifts worked**
- ▶ **Minimum 48-hour rest/recovery breaks between turns**
- ▶ **Maximum 12-hours worked per day (with either 8 or 12-hour shifts)**
- ▶ **Maximum long breaks (4+ days) per cycle**
- ▶ **Minimum night shift (sleep/wake) transitions**

*Based on science and experience. No one schedule meets 100% of the physiological criteria, and no one criteria disqualifies a particular schedule option. It's the overall alignment that counts.

Physiological Criteria



*Based on science and experience. No one schedule meets 100% of the physiological criteria, and no one criteria disqualifies a particular schedule option. It's the degree of overall alignment that counts.



Employee Design Criteria

(Shift worker Preferences)



- ▶ **Based on confidential survey data**
 - a. **Desired schedule features**
 - b. **Family/social needs**
 - c. **Health and safety needs**
 - d. **Personal preferences**
- ▶ **Anonymous questionnaire provides everyone an opportunity for personal input**
- ▶ **Results presented to all as group responses to each question (no individual data)**
- ▶ **Results used to determine employee schedule design criteria**
- ▶ **Provides basis for determining preferred work schedules**



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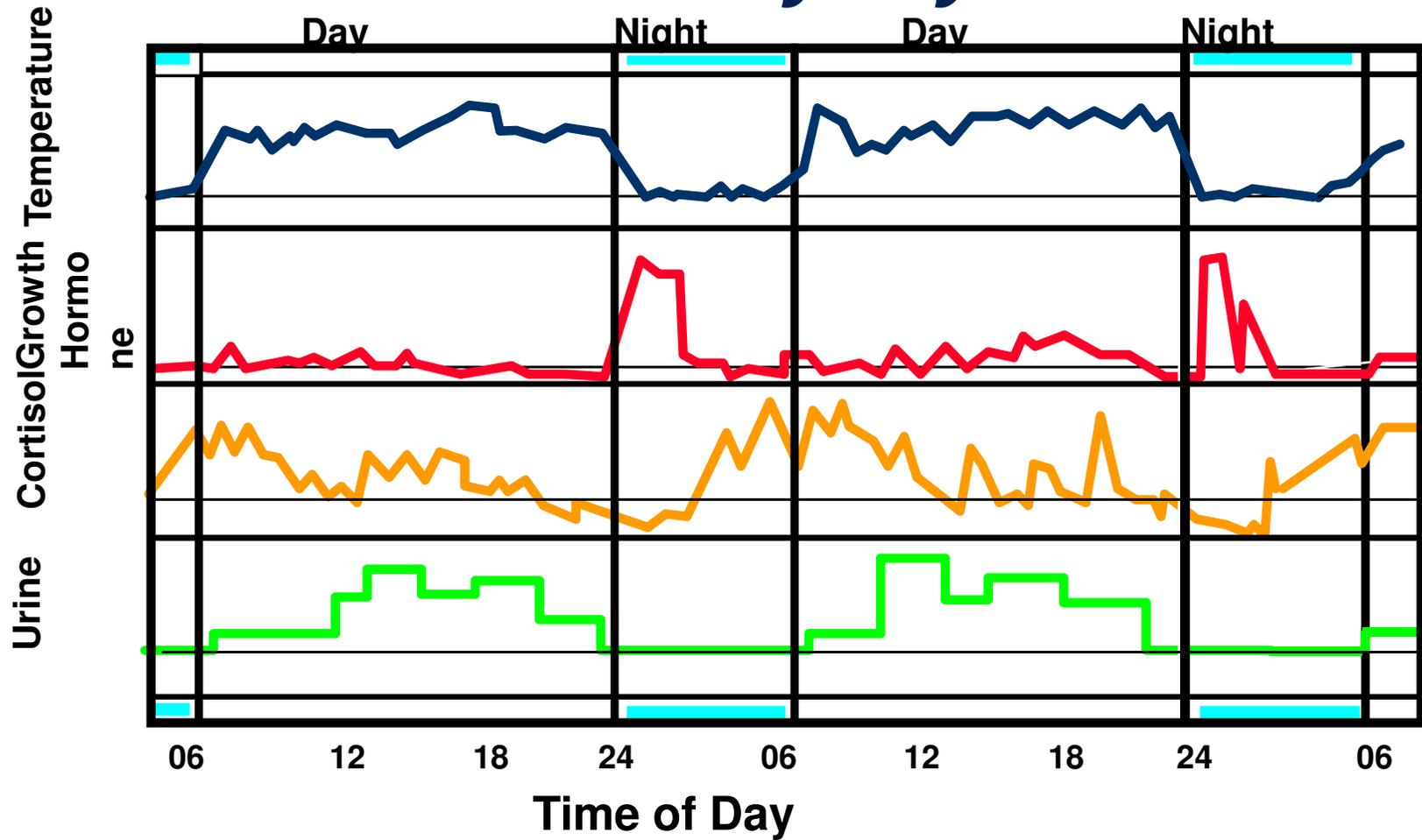
▶▶ *Human Physiology
and
Circadian Rhythms*

Design Specs of the Human Body

Humans were not designed for peak performance at night.

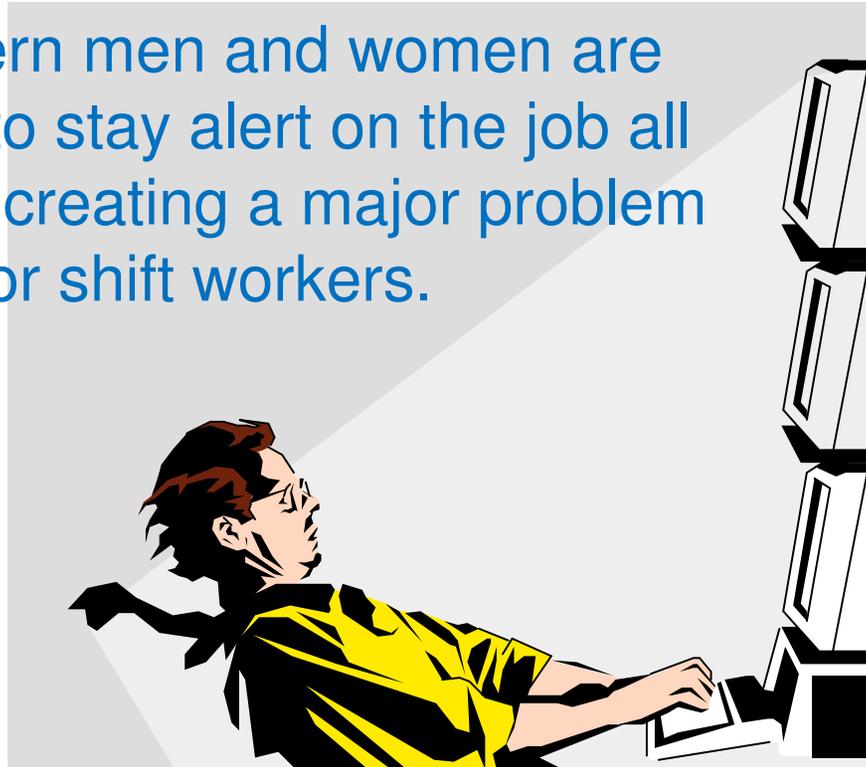


Daily Rhythms

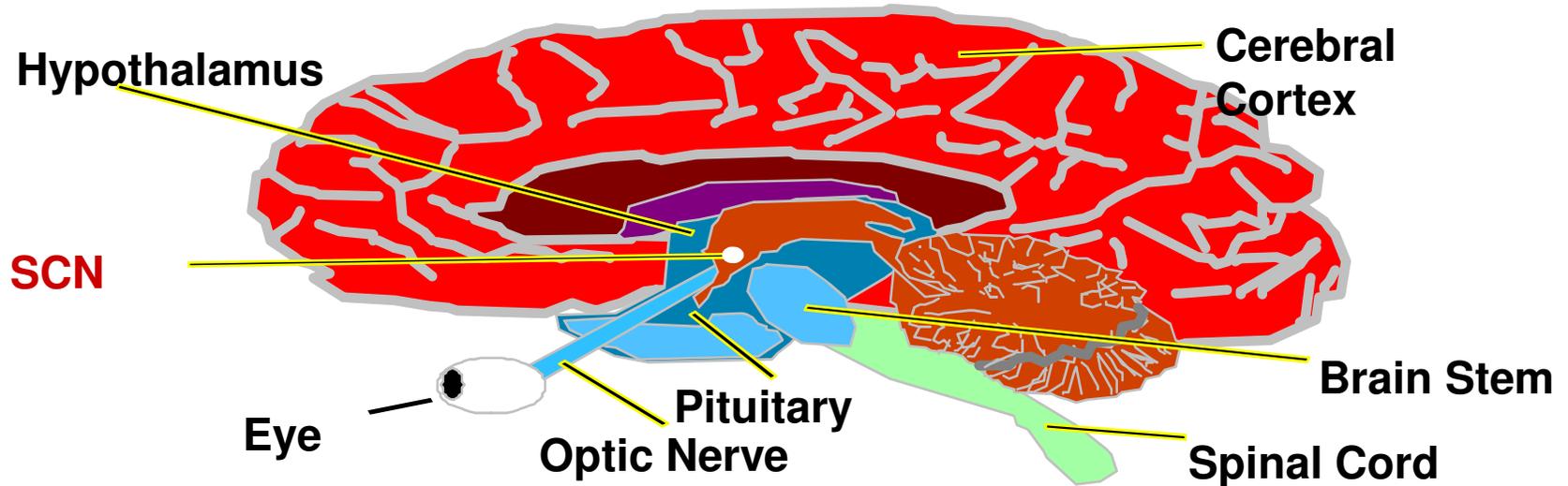


Fighting Mother Nature

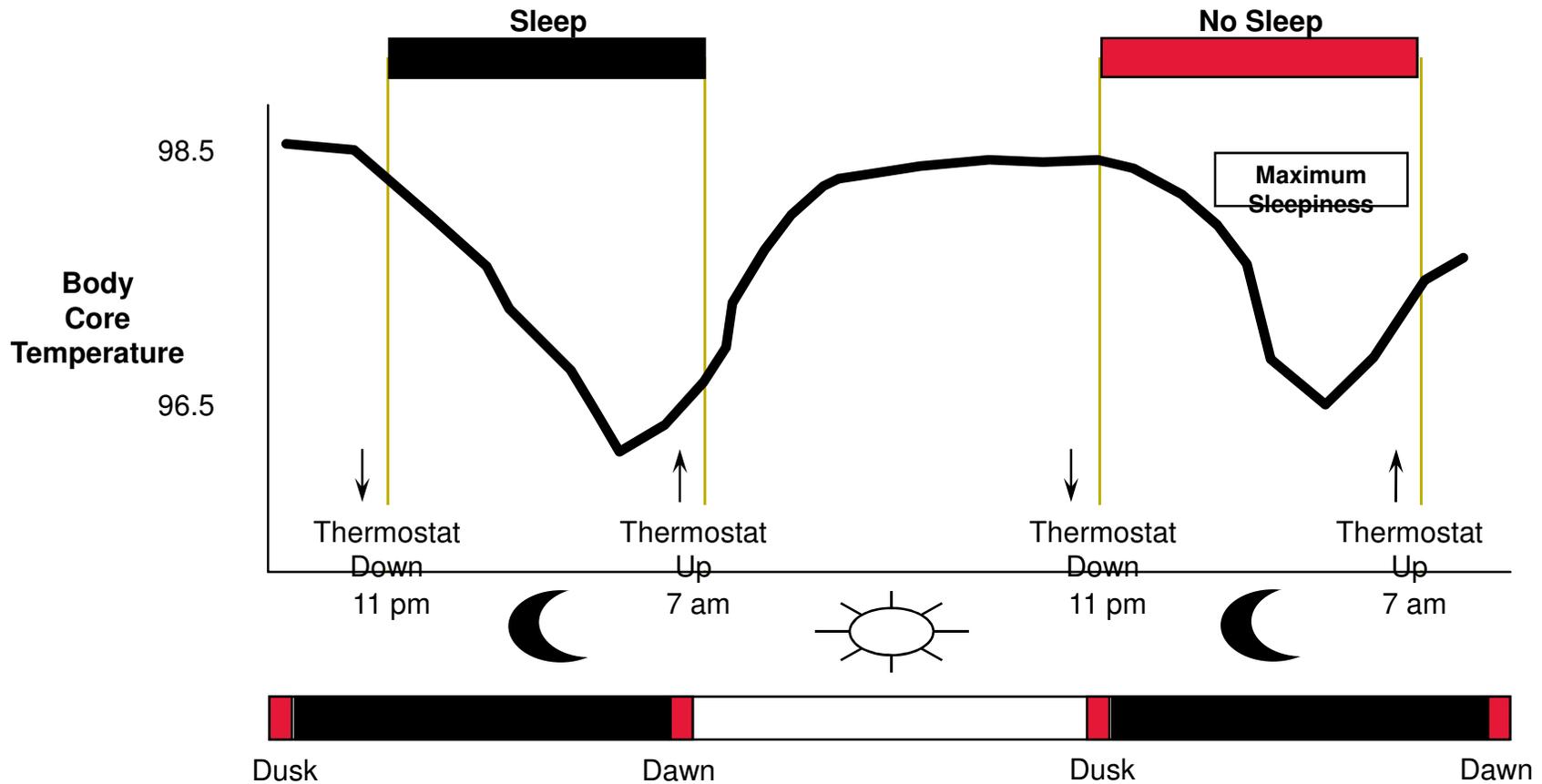
But modern men and women are expected to stay alert on the job all night long, creating a major problem for shift workers.



Suprachiasmatic Nucleus (SCN)



Circadian Temperature Rhythms



Whether we are awake or asleep, body functions continue to follow their Circadian rhythms.



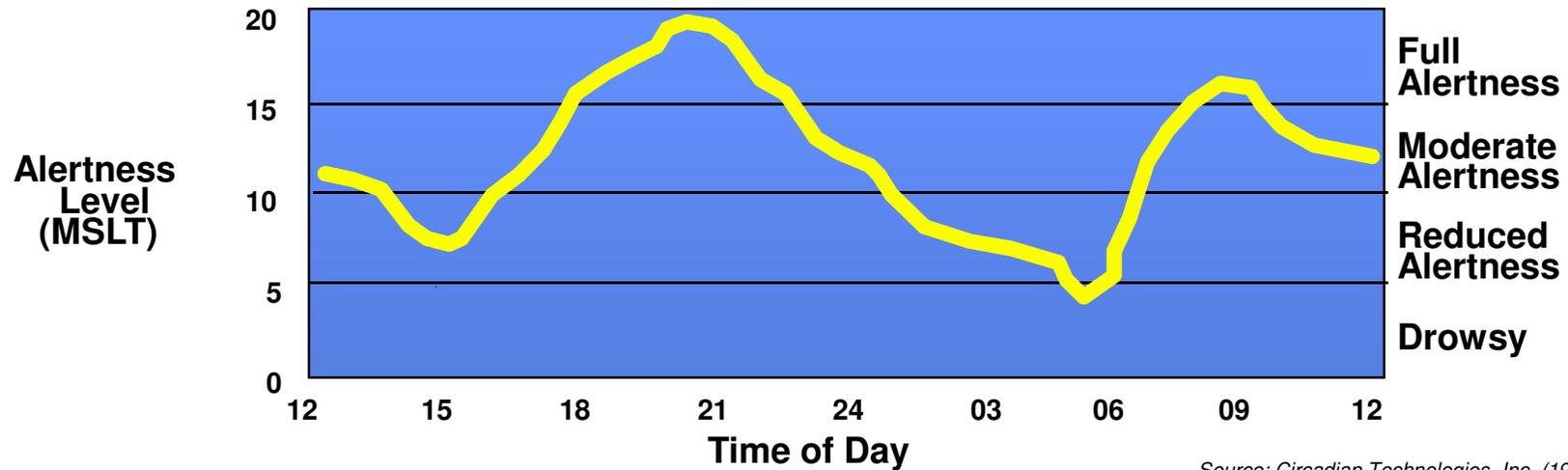


▶▶ ***Work performance and Job safety***

- ▶ **Accidents at night**
- ▶ **High risk times**
- ▶ **Managing fatigue**
- ▶ **Alertness**



Alertness Variability Over 24-Hour Period

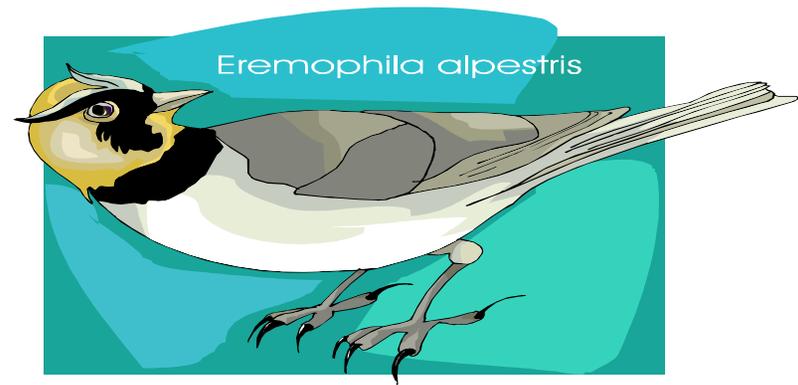


Source: Circadian Technologies, Inc. (1993)

Individual differences

Are you a

▶ Lark



Or an

▶ Owl?



Understanding sleep

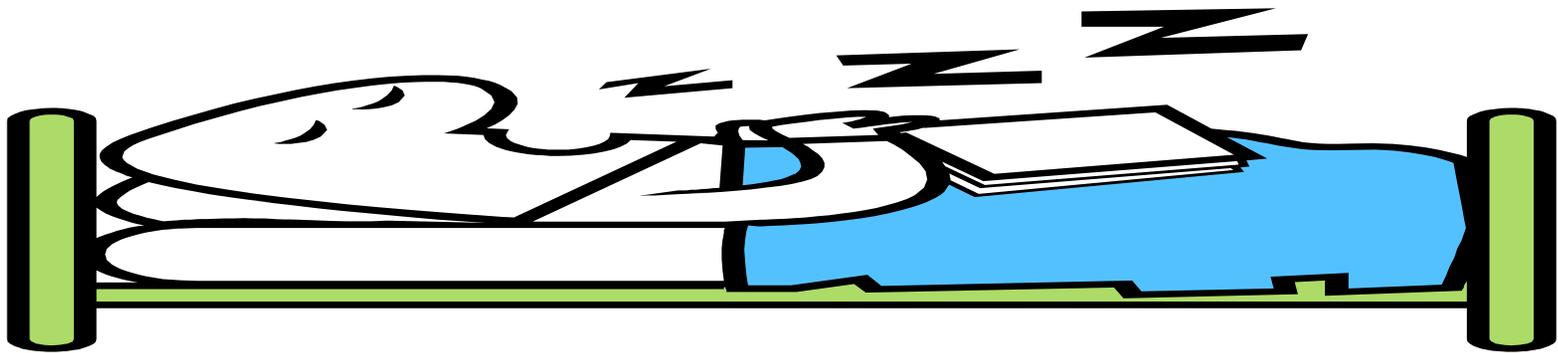
- ▶ Why do we need it?
- ▶ How much do we need?
- ▶ What can go wrong!
- ▶ Sleep Architecture
- ▶ Day time sleep
- ▶ Shift workers



Improving your sleep

▶▶ Managing your environment

- ▶ Light
- ▶ Bedding
- ▶ Ventilation
- ▶ Temperature
- ▶ Noise



How to improve your lifestyle & get better sleep

- ▶ Caffeine
- ▶ Alcohol
- ▶ Nicotine
- ▶ Sleeping pills
- ▶ Natural sleeping aids





Driving

- ▶ Drowsy driving signs
- ▶ Safety tips for the road





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- ▶ Shift working life style training – Schrader Electronics

Schrader Shift working



Schrader Shift workers life style training

- ▶ Sleep
- ▶ Exercise
- ▶ Nutrition
- ▶ Digestion
- ▶ Shift work health
- ▶ Stress/ battling burnout
- ▶ Family life/relationships





Summary



- ▶ **Shift patterns**
- ▶ **Circadian rhythms**
- ▶ **Sleep and alertness**
- ▶ **Driving**
- ▶ **Healthy lifestyle supported by training**
- ▶ **Good support available**
 - ▶ Contact: Health Works
www.makehealthwork.co.uk
 - ▶ Contact: www.circadian.com