

work Sleep and fatigue



You are what you do. Look at any job and you will find a unique worker health profile. A sheep shearer has one of the most physical jobs burning over 5000 calories a day whereas a desk worker struggles to burn calories above the level needed to remain conscious. Medical workers and the farming community have among the highest rates of suicide compared with other jobs. Hospitality workers are among the heaviest drinkers and publicans are the most likely occupation to die of cirrhosis of the liver. The type of work you do and when and where you do it all impacts on your physical and mental wellbeing. When it comes to sleep and fatigue, politicians, on-call doctors, and long-haul truck drivers leave most other jobs napping.

Dr David Harris PhD looks at the complex relationship between your job, health and fitness and highlights the unique health characteristics of particular occupations and how you can turn them to your advantage for improved health, fitness and quality of life.

Each job has its own health profile which is surprisingly stable, often over decades, despite the fact that people come and go. There is something about the industry itself that sustains the health profile of workers within it. So it is that your job affects your sleep, sleepiness and levels of fatigue. In one example, you may find yourself in a job where work performance is judged by hours at the desk and there is a culture that compels you to work longer hours without complaint. Shiftwork is another example of a job where you, the worker, must remain alert during periods of day and night when your body wants to sleep. Whatever your occupation, whether you are aware of it or not, each day you make decisions about how you manage your work, sleep and fatigue.

Sleepy workers make more mistakes and have more accidents. Being awake for 16 hours impairs physical and mental performance as much as a blood alcohol concentration of .05. Australian research shows that one in five fatal road accidents can be attributed to driver fatigue. Fatigue was a contributing factor in disasters such as the Chernobyl nuclear reactor meltdown, the Challenger space shuttle crash, and the sinking of the Exxon Valdez oil tanker. In other words, the benefits of getting the right balance between work and sleep extend beyond the individual and include the company and wider community.

The doziest job in the world

Population studies of sleep show that many jobs involve long hours being worked sporadically, but several occupations are clear winners on the sleepiness scale. Politicians, on-call doctors and long-haul truck drivers regularly manage to grab only 4-5 hours of sleep a day. It may be some cause of public concern when you think that politicians are expected to make decisions that determine your laws and govern your country while they are half asleep. Doctors hold your lives in their hands and read your test results while they can barely keep their eyes open. Long-haul truck drivers speed tonnes of steel and cargo through traffic while fighting 'the sandman'. This is not a criticism of the people who work within these occupations, but recognition that some jobs have particular risks in relation to workers' sleep and fatigue.

How much sleep do you need?

Your body needs sleep. A range of functions occur during sleep that keep you healthy. During sleep, the body rests and recharges energy stores for the next day. Growth and repair of injury occurs predominantly during sleep. Your immune system becomes more active as you sleep, helping you fight infection. Sleep is also important for your mental health. During

Figure 1. The Epworth Sleepiness Test

Situation	Sleepiness score
Sitting & Reading
Watching TV
Sitting inactive in a public place (i.e. theater)
As a car passenger for an hour without a break
Lying down to rest in the afternoon
Sitting & talking to someone
Sitting quietly after lunch without alcohol
In a car, while stopping for a few minutes in traffic
Total Score	

Source: Johns MW. A new method for measuring daytime sleepiness: The Epworth Sleepiness Scale. Sleep 1991; 14(6):540-5

sleep your memories and experiences are sorted and stored and your mood and emotions are moderated.

The past century has seen a global trend towards longer working and waking hours. In the early nineteen hundreds, the average night's sleep was 9-10 hours but in the 21st Century the average is 7-8 hours. Interestingly, your need for sleep changes over your lifetime. Children and teens need around 10 hours sleep per night, but a 65 year old only needs about 6

hours sleep. Exactly how much sleep you need varies from person to person, and is in the range of 6-9 hours.

Are you getting enough?

A good measure of how well you are sleeping is your level of sleepiness during the day. Answer the questions in Figure 1 using the following score guide: 0 = Would never doze, 1 = Slight chance of dozing, 2 = Moderate chance of dozing, 3 = High chance of dozing



How did you do?

Less than 8 = normal sleep, 8-10 = mild sleepiness, 11-15 = moderate sleepiness, 16-20 = severe sleepiness, 21-24 = excessive sleepiness. If you are worried about your level of sleepiness, talk to your doctor.

How do you compare?

Take a minute to think about your own industry regarding sleep and fatigue. How does it compare to the average 7-8 hours sleep of Australians? As with every aspect of your health and fitness, your quality of sleep and levels of fatigue are affected by your work and also by your personal

“As with every aspect of your health and fitness, your quality of sleep and levels of fatigue are affected by your work and also by your personal characteristics and how you manage your personal life”

characteristics and how you manage your personal life. Now, complete the checklist below to help you identify personal and work-related strategies for better sleep and less fatigue. UF

NEXT ISSUE: We look at mental health and your job and ask why medical workers and the farming community have among the highest rates of suicide.

REFERENCES

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TEST YOURSELF:

ARE YOU DOING ALL YOU CAN FOR BETTER SLEEP AND LESS FATIGUE?

Checklist for better sleep		Checklist to avoid fatigue* * Especially for shiftworkers	
Your sleep environment		Ready your body clock to start night-shift	
Sleep in a room that is cool, quiet and dark	<input type="checkbox"/>	Have a short sleep before your shift begins	<input type="checkbox"/>
Have curtains with backing, heavy drapes or blinds	<input type="checkbox"/>		
Have walls, windows and/or doors insulated	<input type="checkbox"/>	Ready yourself to come off nightshift for days off	
Use the hum of a fan or air conditioner to mask outside noise	<input type="checkbox"/>	Have a short sleep after your shift then stay awake until night	<input type="checkbox"/>
Use an answering machine/voice mail	<input type="checkbox"/>		
Talk to neighbours, family and friends about quiet time	<input type="checkbox"/>	Exercise and diet	
Sleep on a quality mattress	<input type="checkbox"/>	Enjoy daily physical activity to keep fit	<input type="checkbox"/>
Keep a note pad and pen by the bed to write down any thoughts or worries that may keep you awake	<input type="checkbox"/>	For shiftworkers, have two meals at regular times and a light meal mid-shift	<input type="checkbox"/>
		Eat regular, healthy meals	<input type="checkbox"/>
Your sleep routine		Snack smart on low glycemic index, healthy foods	
Have a regular sleep schedule	<input type="checkbox"/>	Drink non-alcoholic, low-calorie fluids regularly	<input type="checkbox"/>
Try different sleep times to find what is best for you	<input type="checkbox"/>	Use caffeine to stay alert, but not within 4hrs of sleep	<input type="checkbox"/>
Shower or bath before going to bed	<input type="checkbox"/>	Do not use nicotine or amphetamines	<input type="checkbox"/>
Eat a light meal before sleeping but don't over-eat	<input type="checkbox"/>		
Manage your social time around your sleep schedule	<input type="checkbox"/>	While you are at work	
		Use light activity during work breaks to clear your head	<input type="checkbox"/>
What you eat		If work gets boring, find useful things to do	
Stock the kitchen with healthy snacks and meals	<input type="checkbox"/>	Keep your mind active eg. by listening to the radio	<input type="checkbox"/>
Avoid caffeine 4 hrs before sleep	<input type="checkbox"/>	Do not drive if you are worried that you can't stay awake	<input type="checkbox"/>
Avoid excessive alcohol before sleep	<input type="checkbox"/>	Protect your sleep time, don't take on extra work	<input type="checkbox"/>
Don't drink too much fluid just before sleep	<input type="checkbox"/>		
Don't rely on sleeping tablets	<input type="checkbox"/>	Your work conditions and clothing	
How you relax		Have a well-lit work area that is cool, dry and well-ventilated	
Have at least 30min quiet time before going to bed	<input type="checkbox"/>	Wear comfortable clothing and supportive footwear	<input type="checkbox"/>
Learn and practice a relaxation skill	<input type="checkbox"/>		
Each box without a tick is a step you can take for better sleep		Each box without a tick is a step you can take to avoid fatigue	

Note: If your workplace has some occupational risk factors for sleep and fatigue, raise the issue with your safety representative. Be objective, identify conditions and organizational risk factors and avoid blaming individuals.