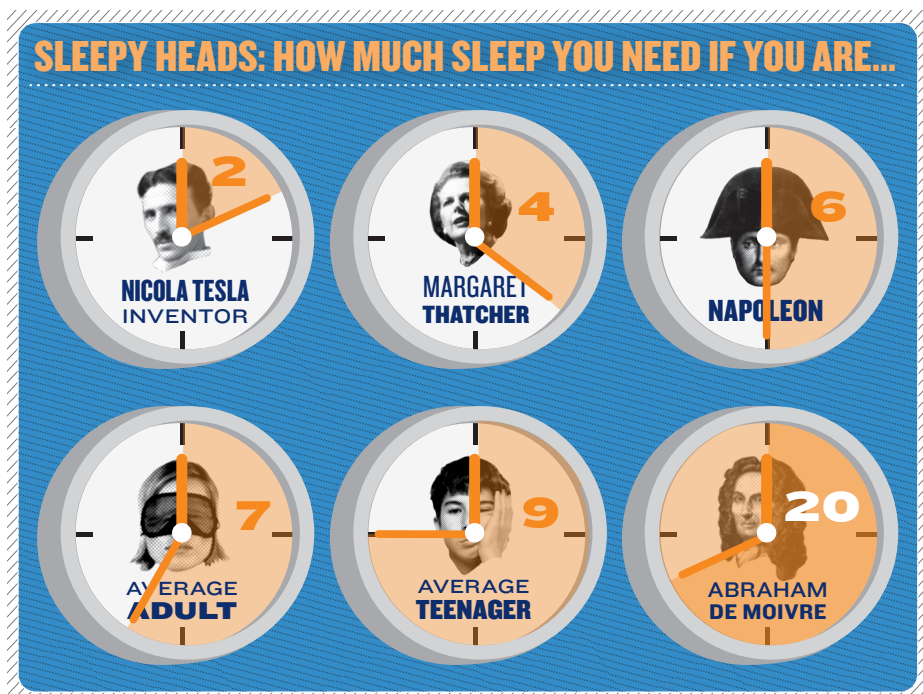


Sleep deprivation a major drag for young minds

Young people are not sleeping enough and their education is suffering as a result, say international researchers. But could we one day do without sleep altogether?



PSHE
SCIENCE



There is a serious health problem affecting half the world's children – and three quarters of children in the UK. It affects their minds, depresses their mood and lowers their ability to acquire knowledge or perform complicated mental tasks. It is having terrible effects on their education. And yet, this condition has been around for millennia, and is simple to cure: lack of sleep.

The latest warning on sleep deprivation comes from researchers from Boston College in the USA, who tested 900,000 children on science, maths and reading and found that those with less sleep did much worse than their well-rested classmates.

This is not just a problem at schools. Sleepiness makes one medical student in five accidentally injure a patient. It is a cause of a fifth of all driving accidents – that means about 400 deaths per year in Britain alone. People who are chronically sleep-deprived have higher rates of

everything from diabetes and obesity to heart disease and depression.

In extreme cases, sleeplessness can be fatal. One very rare form of insomnia can keep sufferers awake for as long as a year before they finally die of exhaustion.

We know that lack of sleep is deadly, but the odd thing is that no one fully understands how sleeping works, or why it is so important for the brain. We know that most animals do it. Elephants sleep for four hours a day. Lions for up to twenty. Dolphins send half their brain to sleep at a time. In the wild, with predators around, sleeping is a huge risk. If frail creatures like us have to do it for seven or eight hours a day, it must be absolutely vital.

Increasingly, though, we humans are looking for ways to cheat the system. Military scientists are leading the way, designing stimulants that can keep soldiers alert and awake for days at a time. Another approach involves send-

ing a mild electrical current through your skull. This seems to refresh tired brains, although no one knows how. Nonetheless, the advance of science does open up a fascinating possibility: what if we could one day engineer ourselves so that no one would have to sleep at all?

WAKING LIFE

'Think of the possibilities!' say enthusiasts. Not sleeping would free up seven or eight extra hours each day: hours for socialising, reading, studying or playing games. We could squeeze 50% more conscious hours into an average lifespan – the equivalent of living to be 117.

But you could argue that this sort of thinking is what got us into trouble in the first place. We have a huge problem with chronic sleepiness because everyone is trying to do too much and to fit too much in. The answer is to slow down; not to add more time to our days but rather to take more time for ourselves.

Q & A

Q Why is everyone so bad at sleeping then?

A For teenagers, one answer is probably too much technology. Texting, gaming and surfing the internet keep teenagers awake. Worse, using screens up close can actually disrupt your body's natural day-night cycle – your 'circadian rhythms'.

Q What do you mean?

A Sleepiness is regulated by hormones which the body produces at different times of day. The body knows what time of day it is partly by how light it is. The bright blueish light from a screen fools your body's systems into thinking it is daytime, which then makes you less sleepy.

Q Any tips for bad sleepers?

A Two important ones. First, only go to bed

when you are tired. Second, if you are lying awake, it is much better to get up and read a book or something than to lie there worrying about it.

SOME PEOPLE SAY...

'If we had eight extra hours per day we'd probably spend them working!'

WHAT DO YOU THINK?

► Sleep deprivation a major drag for young minds

WORD WATCH

Chronically – In medicine, a chronic disorder is one that is sustained over a period of time. The opposite of a chronic condition is an acute condition – one that is severe strikes suddenly. Asthma is a chronic condition. Having a broken leg is an acute one.

Lions – Lions have the luxury of taking 20 hour sleeps because no other creature is foolish enough to try to eat them. Also, because their food (other animals) is so rich, they do not have to eat very often. Elephants, on the other hand, cannot afford to be caught napping.

Military scientists – The US military has a special scientific wing called DARPA, the Defense

Advanced Research Projects Agency. Researchers there work on everything from missiles and drugs to robots and powered exoskeletons.

Stimulants – Stimulant drugs like modafinil are very good at fending off the effects of sleeplessness. The downside is that they produce an effect called tunneling. People on stimulants are good at focusing on one thing, but bad at taking in the rest of the world around them.

YOU DECIDE

1. If a genie offered you the ability to never sleep, would you accept?
2. Is a fuller life always a better life?

ACTIVITIES

1. Make a pie chart of your average weekday, showing how long you spend doing various activities including sleeping. Do you think you have your life balance right? Compare with others in the class.

2. Write a short story about the events (or non events) of a single sleepless night.

 **BECOME AN EXPERT** Check our website for a selection of useful links to videos and further reading.

 **NOTES**

