



Most of us could do with more shut eye

It is becoming increasingly clear that getting enough sleep is vital for our physical and mental well-being. Now, sleep scientist Matthew Walker and others have shown how getting enough sleep is also one of the most important things you can do to protect your brain from Alzheimer's disease. Here's his advice on how to sleep better and reap the benefits.

What's worse, fragmented sleep or shorter – but unbroken – sleep?

We have discovered that fragmented sleep, even if it is of a standard duration (for instance, 8 hours), can be damaging to emotional and cognitive functions. For example, a recent report demonstrated that disrupted sleep significantly lowers your mood.

That's because when your sleep is interrupted, you don't have time to go through all the restorative sleep stages. In particular, we are learning that deep, non-REM sleep is especially important in clearing plaques involved in Alzheimer's disease from the brain (see "Wake-up call: How a lack of sleep can cause Alzheimer's").

As for shorter durations, just one night of insufficient sleep can have immediate effects. For example, a study limited healthy young adults to 4-hours of sleep for one night. The next day there was a measurable effect on their immune system. Specifically, participants had a 70 per cent decrease in critical anti-cancer immune cells, called natural killer cells.

Can you undo the damage if you change your behaviour now? When is it too late?

You cannot get back that which is lost by way of sleep deficiency in the past. However, it's never too late to change for the future. It can have a profound benefit. For example, treating sleep apnoea – a disorder in which people stop breathing and wake up frequently during the night – in Alzheimer's disease patients significantly improves cognitive function. What's more, treating sleep

problems in cognitively typical older individuals delayed their ultimate decline into Alzheimer's disease by up to 10 years. There is always the chance for you to prioritise sleep, and in doing so, help ensure a longer and healthier life.

How much sleep is enough?

Most adults need 7 to 9 hours a night, according to the US National Sleep Foundation. But as we age, the amount of sleep we need changes. An 18 year old, for instance, might need anywhere between 6 and 11 hours. We are often told that older adults need less sleep, but that's probably not true. They seem to need as much sleep as other adults, but that amount is harder to get as we age.

As a general rule, you shouldn't need to set an alarm to wake up in the morning. If you do, you probably aren't getting as much sleep as you need. What's more, time in bed doesn't equal time asleep. Try aiming for 8 hours in bed for a good night's rest.

What are your tips on getting a good night's sleep?

These are five things you can do right now for better sleep.

- 1) **Regularity:** Go to bed and wake up at the same time, no matter what. Even if you've had a bad night of sleep, or it's the weekend. The wake-up time is the most important as this will build up your sleep drive during the day. This is the urge to sleep that is tied to your circadian clock.
- 2) **Temperature:** Keep it cool. Your body needs to drop its core temperature by approximately 1.2 degrees Celsius to initiate sleep. This is the reason it's always easier to fall asleep in a room that's too cold than too hot. About 18.5°C is optimal for your bedroom. Cooler than you think. It's fine to wear socks if you get cold feet. But cold it must be.
- 3) **Light:** Dim your lights before bed. Switch off as many lights as possible in the last hour before bed so as not to interfere with natural production of the sleep hormone melatonin, which is produced in the evening. Tablets and phones in particular generate lots of short wavelength blue light, which reduces melatonin concentrations. So no screen time 1 hour before bed. Blackout curtains are also helpful.
- 4) **Walk it out:** Never lie awake in bed for a significant period of time (more than 20 minutes or so); rather, get out of bed and do something quiet and relaxing until the urge to sleep returns.
- 5) **Pass on the espresso and nightcap:** Avoid caffeine after 1pm, and no alcohol after 5 or 6pm. As a guide, never go to bed tipsy. Alcohol is a sedative, and sedation is not sleep. Unfortunately, most people mistake one for the other. Alcohol also blocks your REM sleep, and it further fragments it with short awakenings thought the night. You wake up feeling unrefreshed and unrestored when having had a drink in the evening.