



TechTalk

Tech Gadgets to Help You Sleep©

by John McCarthy

Hi and a very warm welcome to this week's edition of TechTalk. Since the beginning of the series, we've been concentrating on the benefits that technology has brought to mankind and how it's helped to improve the quality of life for billions of people. There are however negative sides, and the effects of sleep deprivation provoked by technology have been well documented. Our circadian biological clock, also known as biorhythms, is controlled by a group of cells in our brain (in the hypothalamus) which respond to light and dark signals. When we go to bed and switch off the light, melatonin – a hormone which is associated with sleep onset – is released, and levels of this stay elevated throughout the night, promoting sleep. Circadian disruptions such as jet lag can have a very negative effect on sleep patterns, as indeed can other factors of modern-day life, such as irregular hours, and using cell phones, computers and television screens immediately before going to bed, as they inhibit the production of the sleep-inducing melatonin. Research has demonstrated that using a computer late at night is associated not only with sleep disorders, but also with stress and symptoms of depression, high blood pressure, mood swings and a tendency to find yourself nodding off at work because you have trouble sleeping at night.

Some might say that abolishing all use of electronics immediately prior to bedtime is the first step to a better night's kip. Others may find this solution a little extreme, and it's technology that's apparently found a happy medium to the problem. It's all to do with the light that screens emit; namely, wavelengths at the blue end of the spectrum, as these inhibit the production of melatonin. The very latest Apple iOS 9.3 has added a Night Shift feature for the iPhone and iPad which filters the blue spectrum on your smartphone or tablet and protects your eyes with a pleasant red melatonin-producing filter, in the putative interest of improving sleep. I've used this myself, and I remain a doubting Thomas as to whether this actually improves my odds of falling asleep, but there is certainly an obvious benefit in that the screen is considerably more comfortable and relaxing to look at when browsing the iPad at night. For Android devices, there exist various apps that alter the colour of the screens to the warmer, redder end of the spectrum, and some of my friends swear by one called 'Twilight'.

French start-ups are very much leading the way in this area of technology. Withings released the Aura a while back; this is a smart alarm clock with sensors, featuring a colour-changing light, a speaker and an under-mattress sleep monitor. It has a red night-light mode which should be used when getting ready for sleep and a soporific light and sound show. This light will simulate sunset, slowly dimming off until you hopefully fall into the arms of Morpheus. You can also have sounds of waves lapping on the shore, gradually decreasing in volume over a quarter of an hour, helping you to relax and eventually nod off. Just make sure you've made a prior visit to the toilet. In the mornings, it will emit a blue light – which as we know, impedes the creation of melatonin – increasing in brightness and then play a musical tune loud enough to wake you from deep sleep.

Another company, Dodow, has released a sleep stimulator, which you place on your bedside table and it projects a beam onto the ceiling. The idea is that you synchronise your breathing with the movement of the beam: breathe in when the beam expands, and breathe out when it contracts. By concentrating on respiration and the beam, your mind will slowly remove all other thoughts, worries and stresses, thereby enabling you to fall asleep more easily. Over a period of eight minutes, the rhythm of the beam will gradually decelerate your breathing from 11 to 6 breaths a minute, slowing down the metabolism and provoking a pleasant sense of tiredness which will lull you into sweet silent slumber.

That's it for today. Do join me for another edition of TechTalk next week, brought to you courtesy of englishwaves.fr.