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# Wake-up call

Going short of sleep regularly has serious implications for health, according to new research. Patricia Carswell reports

It's not hard to spot someone who's short of sleep. Grumpy and irritable, they're unable to concentrate properly and sport telltale bags under their eyes. As any insomniac or parent of a newborn child will be quick to tell you, sleep is a basic human need. We crave it so much that withholding it has long been used as a form of torture.

Now, though, it appears from research published this month by the University of Warwick Medical School in the UK that lack of sleep does worse than just make us feel bad: it raises the risk of heart disease and strokes.

Professor Francesco Cappuccio and Dr Michelle Miller conducted an extensive research programme which followed up evidence from studies involving more than 470,000 participants in eight countries including Japan, the US, Sweden and the UK.

Their findings left little room for doubt that lack of sleep can have profound long-term health implications. They discovered that people who, over a prolonged period, slept less than five or six hours per night had a greater risk of developing or dying of coronary heart disease and stroke than those getting the seven or eight hours' that are usually recommended. It appeared to make no difference whether the lack of sleep was caused by a sleep disorder or by burning the candle at both ends.

The reasons for the findings are not absolutely clear, but it is known that a chronic lack of sleep produces hormones and chemicals in the body which adversely affect our health. Cappuccio explains: "Lack of sleep increases the chance of diabetes by worsening glucose tolerance and causing insulin resistance; it increases appetite by increasing leptin and reducing ghrelin (two hormones regulating appetite), and reduces energy expenditure, all contributing to obesity. It also increases blood pres-

sure, increases the stress hormone cortisol and activates low-grade inflammation with the production of chemicals called cytokines which participate in the development of atherosclerosis [the build-up of fatty deposits in the arteries]."

It's not just the sleep-deprived who are at risk, though: the research was bad news for sluggards as well. Those getting more than nine hours sleep over a long period fared just as badly, also showing an increased risk of suffering heart disease and stroke, as well as cardiovascular disease.

The factors behind the poor results among the long sleepers appeared to be different from those affecting the sleep-deprived, though. Cappuccio describes long sleep as a consequence or marker of chronic ill health, rather than a cause of it. As the authors of the research point out, sleeping for long periods is often associated with depression, unemployment, lack of exercise and undiagnosed health conditions.

The ideal length of sleep, according to Cappuccio, is between six and eight hours a night. Achieving good sleeping habits is not easy, however, in a world that never sleeps; work and social life can chip away at the time we spend in bed, and the internet buzzes 24 hours a day.

Indeed, a health and fitness study of more than 750 UAE residents, conducted by Zarca Interactive, a US company with offices in Dubai, revealed last year that a startling 68 per cent of those interviewed did not get proper sleep at night; many admitted to spending time at night surfing social networks on the web, watching television or socialising.

With so many people in the Emirates working long hours, it's not surprising that there is a propensity to develop bad habits and resort to television and the internet to relieve stress. Cappuccio refers to this kind of lifestyle as a "ticking time bomb".

"There is an expectation in today's society to fit more into our lives. The

whole work/life balance struggle is causing too many of us to trade in precious sleeping time to ensure we complete all the jobs we believe are expected of us".

Cappuccio advises applying some discipline in order to ensure good health.

"Do not trade your sleeping time for other activities," he advises. "Avoid acquiring a lifestyle that curtails your sleep time below six hours per night."

What, though, of those whose lack of sleep is not caused by a party lifestyle or by late-night tweeting? The results of the research may be disturbing news for insomniacs and could give them yet another thing to fret about as they lie awake in the early hours. So long as this is just an occasional problem, the odd bad night's sleep is nothing to worry about, according to Cappuccio: "A single night does not matter for long-term effects; we are referring to sustained sleep deprivation of months or years."

Where sleep patterns are disturbed over a period of time, he recommends applying a routine of "sleep hygiene" in order to fall asleep easily at night (see right). A few small adjustments can make a significant difference to the quality of an individual's sleep.

If the problem persists, medical advice should be sought. If there's one thing that should be learnt from this study it is that sleep problems should not be left untreated: your long-term health could depend on it.