

EMFs and you

We live in a world that – thanks to advances in modern technology – comes with many luxuries and conveniences. But do these modern-day comforts come with a downside? Tara Thorne reports.

SINCE the first light bulb was switched on by Thomas Edison in 1880, planet Earth has been bombarded by an onslaught of electromagnetic fields (EMFs). In this age of mobile phones, wireless routers, televisions, power lines, stereos and portable GPS devices, we live in a veritable “electrosmog”, and this has some people very concerned about the impact EMFs are having on our health. “People have known forever there are health problems associated with electricity,” says Sam Milham, MD, MPH and author of *Dirty Electricity – Electrification and the Diseases of Civilization*. “Early on, people noticed the biological affects of electricity, which makes sense because everything in our body works electrically,”

to exposure to EMFs.” Symptoms include skin conditions such as redness, tingling, and burning sensations, fatigue, tiredness, concentration difficulties, dizziness, nausea, heart palpitations and digestive disturbance. But are these genuine symptoms or a placebo effect due to a fearful population?

To examine this further, in 2007 the Bioinitiative Working Group released a report after reviewing over 2,000 studies. The report suggested chronic exposure to even low-level radiation (such as that from mobile phones) can cause various different cancers and contribute to Alzheimer’s disease and dementia as well as heart disease and other ailments. In 2012 the group followed up this report with yet another, which stated that the evidence for risks to health from EMFs had substantially increased since the 2007 report. Their 2012 report cited risk of sperm damage or even infertility for those men who carry mobile phones in their pockets or on their belts, and also showed strong evidence to suggest that EMFs may increase autism symptoms and risk.

In May 2011 the World Health Organisation classified mobile phone radiation as “possibly carcinogenic to humans”, thanks in part to a study performed in 2010 by the International Agency for Research on Cancer (IARC). The study found a 40 percent increase in glioma, (the most common type of malignant brain tumour), for the heaviest mobile phone users (1,640 hours or more cumulative call time, or an average of 27 minutes of daily use over a period of 10 years). Compounding concerns, a 2014 French study published in the *British Medical Journal* found heavy mobile phone users, (“heavy” equating to about half an hour of daily use for five years) were 2-3 times more likely to develop a glioma compared to users who didn’t use their mobile phones as regularly. And in 2015 a Swedish study involving over 4,000 people, published in *Patho Physiology*, also found an increased risk

According to a report from the Bioinitiative Working Group, men who carry mobile phones in their pockets or on their belts risk sperm damage or even infertility.

he says; “Our brains, muscles and thoughts communicate electrically through our synapses and brain cells, so it’s no wonder man-made electricity interferes with our body.”

What are EMFs?

EMFs are invisible areas of energy that are produced with the use of electrical power and many believe they are significantly harmful to our health. In fact, the omnipresent electromagnetic “soup” we live in has led to a condition known as electromagnetic hypersensitivity (EHS). According to the World Health Organisation, “EHS is characterised by a variety of non-specific symptoms, which afflicted individuals attribute

of malignant brain tumour associated with long-term use of both mobile and cordless phones.

Indeed, Milham believes some of the most common diseases in modern society can be attributed to the electrical currents pulsing through us each day. "Electricity bothers us in lots of ways," he says, "but I think ultimately what it does is cause a generalised stress reaction in the body. And chronic long term

Unfortunately, children are at greater risk and data is limited but urgently needed on the effects of EMFs on children's health. Suffice to say, compared to adults, children and adolescents are at greater risk due to their thinner skin and skulls as well as smaller heads and developing nervous systems. Additionally, they will ultimately accumulate more years of EMF exposure during their lifetime,



* Protect yourself

Many of us won't – or can't - give up the advantages which are accompanied by EMFs. So how can we mitigate at least some effects?

- Don't have wireless routers in your house and instead hardwire your router to your computer. If this isn't an option, be sure to turn your router off at night.
- If you must have your phone by your bed at night, put it on "airplane" mode.
- Don't buy a house near a transmission tower.
- Avoid compact fluorescent lights: one of the worst culprits of EMFs.
- Never stand near a microwave when it's on; be sure you're at least 15 feet away.
- When charging your mobile phone have it at least 10 feet away from your body.
- Don't carry transmitting devices, including mobile phones, close to your body.
- Live a life that's as toxin-free as possible, to give your body the best chance of defence.

Cause for concern

Researchers documented an increase in cancers among people living near transmission towers when television was introduced in Australia in 1956. Studies since have confirmed these findings. During World War II Russians noticed that radar operators, (who used radio frequency waves) often had symptoms now attributed to electromagnetic hypersensitivity. In the 1970s, Nancy Wertheimer, PhD detected a spike in childhood leukaemia among children who lived near electric power lines.