

It's sleek, colourful, compact and convenient. It's your umbilical cord to society. With it you can order a kilo of sausages from the car; book a taxi from the supermarket; wish Aunt Martha happy birthday in a traffic jam and amuse fellow train travellers with a domestic diatribe. The mobile phone – that time-saving, fashion-stating, peer-group signature that makes you contactable 24 hours a day.

What a boon for business and society ... if only the devices were safe.

But that is not necessarily the case.

Mobile phones receive microwave signals from, and transmit signals to, the nearest phone tower (also known as a base station). Similar to radio and television signals, these microwaves travel through the atmosphere and into people who happen to be in their path. In metal enclosures such as cars, trains and lifts, the signals are reflected back and forth, irradiating fellow passengers. Whenever a mobile phone is turned on, it is continually emitting signals, even when no call is being made, because it is in constant touch with a phone tower. If these signals were visible, we would see ourselves enveloped in a complex web of radiation, enormously dense in high use areas such as city centres.

Is this radiation dangerous?

More and more studies are finding that the radiation emitted by mobile phones is linked with health problems. An important Australian study some years ago showed that mice exposed to mobile phone radiation developed double the normal number of lymphomas. Other studies have found that mobile phone radiation caused memory loss in mice, changes to human brain patterns, changes to the growth and development of cells and even breaks to DNA. Mobile phone users have reported a range of symptoms experienced when making calls, including headache, concentration problems, dizziness, warmth/heat on the ear, tingling, confusion, nose bleeds and fatigue.

In Sydney a study is now being conducted which, so far, appears to show profound effects on people after they have been using a mobile phone for just ten minutes!

Even the very low levels of radiation emitted by mobile phone towers could be a risk. Late last year, Dr Leif Salford found that exposure to the radiation from mobile phones at levels you would receive near a tower caused the protein albumin to leak through the blood-brain barrier and suggested this might be responsible for neurodegenerative diseases such as Alzheimer's. In another study, blood samples exposed to radiation at the levels emitted by phone towers showed evidence of chemical mutation.

But what of other serious problems such as cancers and leukaemias? Mobile telecommunications systems are comparatively recent developments – just over a decade old – and cancers and leukaemias can take many decades to develop. If there is a connection, it is not likely that the ramifications will be experienced for many years to come. However, already there are worrying signs. Some mobile phone users have developed brain tumours adjacent to where they held their mobile phones and have undertaken legal action as a result.

While the debate on the safety of mobile phones continues, phone towers themselves are proliferating like rabbits as the government allows additional players into the telecommunications arena. With a total

The Low Down On The High Profile Mobile Phone

By Lyn McLean

of seven networks approved, the number of phone towers is likely to at least double. This means that no residence will be far from the unsightly blight of a phone tower, while the web of electromagnetic emissions will become even more dense.

Moreover, federal legislation allows carriers to erect some telecommunications facilities without notifying the affected community or the local council, and in defiance of council and state government planning regulations. These so-called 'low impact' antennae are classified according to their appearance – that is, they don't protrude too far from buildings – but this classification has nothing whatsoever to do with the radiation they emit. Antennae of this sort have been sprouting unheralded on tenants' roofs, in neighbours' yards, on tall buildings of every description, and next to schools. And communities have been powerless to oppose them.

If the radiation from mobile phones and phone towers is potentially dangerous, why is the technology allowed to proliferate exponentially?

The Australian Government – which maintains that there is no substantiated evidence of health risks posed by mobile phones and towers – receives millions of dollars from carriers by selling them spectrum and annual licences. (The current projected budget surplus of \$2.8 billion relies on sales of \$2.6 billion worth of spectrum licences for use with mobile phone frequencies.) The telecommunications industry – which also maintains that there is no substantiated evidence of health risk posed by mobile phones and towers – is an immensely profitable industry which, by an admission of health risk, would open itself to a rash of litigation.

The Australian Standard for radiation protection has traditionally been – and continues to be – devised by a committee dominated by industry, and has ignored a large body of evidence of adverse effects at low levels of radiation. It allows people to be exposed to much higher levels of




radiation than have been found in many studies to be associated with risk. So the time-worn consolation, "well, it complies with the standard" is really no comfort at all.

As the radiation mobile phones emit is a potential health risk, many people are asking what they can do to protect themselves and their families. Here are a few tips on how to reduce your exposure:

- ▲ Reduce the amount of time you spend on a mobile phone. Use a landline phone in preference and use your mobile phone to receive calls which you later return on a landline phone.
- ▲ If you use a mobile phone in your

car, make sure you have a correctly installed external aerial that disconnects the handset aerial.

- ▲ Never use a mobile phone inside a lift, train, bus or car (without an external aerial) because the vehicle reflects signals back into the body of the user and fellow passengers.
- ▲ Avoid carrying a mobile that is turned on next to the body, as the phones emit radiation even when not in use.
- ▲ Be cautious about using a handsfree device with an earpiece because reports suggest that it acts as an antenna, conducting radiation into the head.
- ▲ Do not allow children to use mobile phones, as children have been shown to absorb more radiation than adults.
- ▲ Be careful that infants don't suck the aerial of your phone.
- ▲ Be aware that cordless phones also operate using microwaves, and that newer models that allow greater coverage are not dissimilar to mobile phones.
- ▲ In locations that are inappropriate to receive calls – churches, theatres, classrooms, trains and, some would say, restaurants – make sure your phone is turned off to avoid irradiating (and irritating!) the people near you.

Such has been the community concern about this issue that a Senate Inquiry into EMR is being held. Letters from the public are invited and can be sent, before June 16, to: Senate Committee on Environment, Communications, Information Technology and Arts, Suite 1.57, Parliament House Canberra ACT 2600. 

Lyn McLean is secretary of EMRAA (Electromagnetic Radiation Alliance of Australia) and is community representative on a number of national committees. For further information about EMR, visit EMRAA's web site at <http://ssec.org.au/emraa> or ring Lyn on 9523 4750.

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