

CELLPHONES AND THE BIG C



It will be a while before the health dangers of mobile phones are proven but meanwhile concern has spread worldwide

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IT MAY be another 30 years before we know for sure whether cellphone use causes cancer, damages unborn babies or affects developing young brains.

That's when the first long-term study to be conducted – involving a quarter of a million people in five European countries – is expected to be completed.

But what do we do until then?

Alarming warnings linking cellphone use to cancer and

other conditions keep cropping up in headlines around the world.

New research warns pregnant women to refrain from using cellphones to avoid harming their unborn babies.

The research also says kids should avoid cellphones, cordless phones and handheld computers as their thin skulls make them more susceptible to potentially dangerous radiation emitted by the devices.

Everyone, young and old alike, should switch off their

cellphones if they keep them in a pocket near their bodies, studies warn.

And while the debate about cellphones' effect on the human body rages on, authorities in Germany, France and Finland are concerned enough to have stepped up restrictions on their use.

In Germany low-emission phones carry a seal of approval while in Finland the government advises children to stick to texting and not talk on their cellphones.

In France cellphones may not be advertised to children younger than 12 and must be sold with hands-free extensions to limit radiation.

And an international panel of experts recently warned against the use of cellphones and other electronic devices by children and pregnant women.

In Britain a recent study showed a 50-minute cellphone conversation is enough to change cell activity in the part of the brain closest to the phone's antenna.

The Cancer Association of South Africa (Cansa) is also concerned about the potential danger and will launch a campaign for safe cellular use in June this year.

Meanwhile more and more cellphone manufacturers are including warnings in their manuals such as, "Keep phone at least 25 mm from your body including the abdomen of pregnant women and the lower abdomen of teenagers" and "reduce the amount of time spent on calls".

Some scientists predict it's only a matter of time before there will be confirmation that cellphone radiation is a contributory factor in cancer and other illnesses.

They even compare cellphone use with smoking tobacco, which for years was considered safe, even by doctors.

CONCERN that cellphone radiation can trigger cancer and other conditions stems from the fact phones emit low-level radio frequency (RF) radiation.

A phone's Specific Absorption Rate (SAR) is the industry measurement for the amount of RF energy the body absorbs.

These rates can vary from phone to phone but all phones sold in America must have a SAR rate no greater than 1,6 watts a kilogram.

A phone's SAR rating should be mentioned in the user's manual although it's often hard to find in the small print.

'Due to billions of dollars being made by the industry in Southern Africa it's not in their interest to educate the public'

In 2009 American research group Environmental Working Group released a guide rating more than 1 000 cellphones according to radiation levels.

Among the phones with the lowest radiation was the Samsung Impression with a maximum radiation of 0,92 W/kg and the Motorola MOTO VU204 with 1,55 W/kg.

It's suspected the higher a phone's SAR the more damage it can cause.

"Cell membranes in the body are electrically charged and the pulsed radio waves used by mobiles make them vibrate, dislodging the calcium that binds the cells together," says biologist Dr Andrew Goldsworthy of the Imperial College London.

He says cells can become susceptible to damage, including those that protect against cancer.

LAST year Cansa invited American scientist Dr Devra Davis to talk about her research.

An epidemiologist and professor at the University of Pittsburgh, she's the author of *Disconnect: The Truth About Cell Phone Radiation, What the Industry Has Done to Hide It and*

How to Protect Your Family.

She says studies have shown children who use cellphones may be particularly vulnerable to developing brain tumours because the signals penetrate deeper into their brains.

Paul Rosch, clinical professor of medicine and psychiatry at New York Medical College, agrees.

"Yet this is the segment of the population now being targeted here in a \$2-billion (about R14-billion) American advertising campaign that views tweens (children aged eight to 12 years) as the next big cellphone market.

"Firefly and Barbie cellphones are also being promoted for six- to eight-year-olds," he says.

Tracy-Lee Dorn, chair of the Electromagnetic Radiation Research Foundation of South Africa, says there are thousands of independently funded studies that have shown a link between cellphones and brain cancer, as well as other conditions.

"Doctors, scientists, and awareness groups across the world are appealing for more stringent measures on cellphones, cellphone masts and Wi-Fi to protect the public but

due to billions of dollars being made by the industry in Southern Africa it is not in their interest to educate the public," she adds.

Henry Lai, a biologist studying the effects of electromagnetic fields at the University of Washington, has done a lot of research in this field.

He says with the right equipment it's fairly simple to show cellphone radiation can damage DNA but that "if you show the results to the public that's most likely the last time you will use that equipment".

DESPITE these scientists' claims and government warnings many still believe it's not harmful to use cellphones.

Cancer Research UK and US say there's no proven link between cellphone usage and cancer but "we can't be completely sure about their long-term effects".

More studies are now under way in many countries.

Cancerous tumours usually develop after decades of exposure, and as cellphones have been in widespread use for less than 20 years in most countries nothing conclusive has yet been published.

"Because cellphone use has grown so fast and technology changes every year it's as if we're trying to study the car in which we're driving," Davis says. □

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LIMIT YOUR EXPOSURE TO RADIATION

It's hard to manage without a cellphone but here's how you can limit your and your family's exposure to radio-frequency fields:

- Buy cellphones with low SAR ratings.
- Allow children to use cellphones only in emergencies or ensure they're used mostly for texting. A cellphone used some distance from your body means less exposure to radio-frequency fields compared with the handset being held against your head.
- Wait until children are teens before giving them a cellphone.
- Turn your cellphone off more often. While it's on it emits radiation

intermittently, even when you're not making a call.

- Encourage people to reach you on your landline if you have one.
- Avoid carrying a phone in your shirt or trouser pockets when it's switched on because this maximises exposure.
- Use the loudspeaker or a hands-free set-up when making calls and keep the phone away from your body.
- Keep calls short. Exposure can be reduced by limiting the number and length of calls.