

# Four Studies Add to Evidence of Wireless Technology-Related Electromagnetic Radiation in Humans

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*New studies from Sweden, China, Australia and the U.K. shed light on human exposure to electromagnetic radiation from wireless technologies, but the authors of one study alleged industry tried to censor their research, and in another case, critics accused researchers of having conflicts of interest with the telecom industry.*

In the first example, an international peer-reviewed journal — Annals of Case Reports — on Jan. 10 published a Swedish [case report](#) showing [5G radiation](#) causes symptoms indicative of "[microwave syndrome](#)."

The report initially was censored by the telecom industry, the study authors said.

Dr. Lennart Hardell, Ph.D, retired professor of oncology at the Örebro University Hospital in Sweden, and Mona Nilsson, managing director of the [Swedish Radiation Protection Foundation](#), co-authored the report.

Nilsson told The Defender, "The telecom companies tried to [censor the article](#)" in spring 2022 after the [study initially appeared in a Swedish medical magazine](#).

"A representative of the [Ericsson company](#) — the world leading 5G infrastructure provider — and the umbrella organization for 1,200 tech companies, all the major telecom companies in Sweden, [wrote to the editor](#) of the Swedish magazine and asked him to withdraw the article," she explained.

"This is the first case report of the microwave syndrome caused by 5G," Hardell told [The Defender](#), adding that "historically, many risk factors for human health have first been identified by clinical observations."

According to Nilsson, the study — which examined the change in physical symptoms

experienced by a 63-year-old man and a 62-year-old woman when a 5G cellular tower was installed on the top of their apartment building — “confirms the concerns raised for several years by hundreds of scientists and physicians about the [dangers of the 5G rollout](#).”

Nilsson pointed out that 5G was rolled out “without any previous studies showing that 5G is safe for humans or the environment.”

Nilsson continued:

“It is a scandal that this industry, in spite of the complete lack of evidence showing that 5G is safe, has obtained the right to expose people without their consent, in their own homes to massively increasing levels of pulsed microwave [radiation](#) that have the capacity to rapidly destroy their health.”

“The telecom industry knows about the effects on people’s health, but are doing all they can to cover up the harms.”

Numerous people, she said, contacted the Swedish Radiation Protection Foundation with reports of their health being destroyed by 5G equipment installed in their neighborhoods.

“Based on the measurements of massively increased radiation from 5G and what we know this far,” Nilsson said, “we can conclude that 5G is very dangerous and must be halted.”

## Cellphone use linked to brain cancer, Chinese study concludes

Meanwhile, a [peer-reviewed study](#) by the Faculty of Medicine of the [Chinese University of Hong Kong](#) reported that the incidence of primary [brain cancer](#) in 2020 was associated with cellphone use, [The Epoch Times reported](#) on Jan. 10.

The brain cancer research, carried out by the Chinese University of Hong Kong in conjunction with the Association of Pacific Rim Universities, was published on Sept. 1, 2022, in [Neuro-Oncology](#).

“Our study provides the most up-to-date evidence on the global distribution and risk factors of and trends in primary brain cancer,” said [Dr. Martin Chi-sang Wong](#), senior corresponding author of the study, and professor from The Jockey Club School of Public Health and Primary Care, Faculty of Medicine, Chinese University of Hong Kong, in a [Jan. 5 press release](#).

According to the researchers, the rate of brain cancer was higher in high-income jurisdictions, and was closely related to the per capita gross domestic product, the human development index and the prevalence of traumatic brain injuries, occupational carcinogen exposure and [mobile phone use](#).

“Policymakers in different regions should implement evidence-based, targeted prevention strategies to control relevant risk factors,” Wong added.

## Australian researchers: Wireless technologies ‘an environmental stressor’ for humans

Another recent peer-reviewed study — published Dec. 20, 2022, in [Frontiers in Public Health](#) — further underscored the potential impact of the electromagnetic signals from wireless

technologies such as cellphones.

According to researchers with the [Oceania Radiofrequency Scientific Advisory Association](#) (ORSAA) in Brisbane, Australia, and the [Centre for Environment and Population Health](#) at the School of Medicine and Dentistry at Griffith University in Brisbane, there is an “extensive evidence base revealing that significant stress to human biological systems is being imposed by exposure to everyday wireless communication devices and supporting infrastructure.”

“This evidence is compelling enough to warrant an update in medical education and practice,” they added.

In their report, the researchers reviewed the methods and findings of 1,106 experimental and epidemiological studies collated within the ORSAA database that were focused on the biological and health effects of electromagnetic fields and radiation.

The results showed that two-thirds of the experimental and epidemiological papers found significant biological effects, the researchers said, adding:

“The breadth of biological and health categories where effects have been found was subsequently explored, revealing hundreds of papers showing [fundamental biological processes that are impacted](#), such as protein damage, biochemical changes and oxidative stress.”

The researchers also suggested a set of “best practice guidelines” for treating patients affected by electromagnetic exposures and for using technology safely in healthcare settings.

### U.K. study finds 32% increase in cellphone-related RF-EMF in teens’ brains, but researchers ignore biological implications

Additionally, a peer-reviewed article accepted for publication in [Environmental International](#) measured levels of electromagnetic radiation in adolescents in the U.K. — but, according to critics of the study, researchers failed to measure the potential biological effects of that radiation.

The U.K. researchers conducted what they said is the [first longitudinal study to estimate daily dosages](#) of [radio-frequency electromagnetic fields](#) (RF-EMF) in the bodies of more than 6,000 adolescents.

They found that RF-EMF doses to the brain increased 32% over a two-year period. The main contributor? Talking on a cellphone.

The study is part of the Study of Cognition, Adolescents and Mobile Phones, or [SCAMP](#), the authors said.

In the study, the team of 11 researchers — including [Martin Röösli](#), Ph.D., associate professor of environmental epidemiology at the University of Basel in Switzerland, and head of the environmental exposures and health unit at [Swiss Tropical and Public Health Institute](#) — estimated the daily “dose” of RF-EMF that adolescents received from their daily activities, such as using a phone, laptop, tablet or sitting near a Wi-Fi router.

Using reports from the participants and statistical analyses, the researchers estimated the adolescents' daily RF-EMF dose — by measuring the [specific absorption rate](#) (SAR) in millijoules per kilogram per day (mJ/kg/day) — for eight tissue areas of the participants' bodies at two different times.

First, they made a “baseline” assessment between November 2014 and July 2016, when the adolescents were roughly 12 years old. About two years later, they completed a “follow-up” assessment.

The researchers then compared the baseline and follow-up numbers to get an estimate of the change in daily RF-EMF dose the adolescents received — both in their body overall and in specific areas of the body — over the two-year period.

They noted, however, that while initially there were 6,605 adolescents in the study, they were able to get both baseline and follow-up data only for 3,384 of the teens, mostly due to attrition.

The researchers noted that the RF-EMF dose was highest in the right temporal lobe of the brain, at the beginning of the study and again two years later.

Moreover, they noted that while the whole-body dose was similar at the two time points, they saw a 32% increase in RF-EMF dose for the temporal lobe of the brain at the two-year follow-up.

Making and receiving phone calls were the main activities contributing to participants' daily RF-EMF dosage, the researchers said, both at baseline and two years later. The teens were for the most part making calls on the 2G network, before the 5G rollout.

### U.K. study is ‘industry-friendly,’ critics say

Commenting on the U.K. study, [Alasdair Philips](#), scientific director of [Powerwatch](#), a forum for “knowledgeable engineers, scientists and medical researchers who are concerned about the consequences of irradiated ‘blue world’ we are creating,” told The Defender he had “problems with the approach and understanding of the authors.”

“In my view, it is industry and government’s way of finding no cognitive, behavioral or health problems related to wireless device use, ” Philips, an electrical and agricultural engineer who worked in industry and academic research for more than 50 years, said.

Philips is not alone in pointing to collusion between the telecom industry and the study’s authors, including Rööslä.

In July 2020, Hardell wrote a letter — endorsed by seven additional researchers — to the president of the Swiss Federation alerting her that Rööslä, who chaired the Swiss advisory expert group on electromagnetic fields and non-ionizing radiation, had verifiable “conflict of interest” and a “[history of misrepresentation of science](#).”

Additionally, Eileen O’Connor, co-founder and director of the [EM Radiation Research Trust](#) in the U.K. and board member of the [International EMF Alliance](#), also characterized the study as “industry-friendly” and noted that its authors made “no mention of [non-thermal biological effects](#) associated with pulsed microwave radiation.”

“The keywords for the paper are ‘estimate and assumed’ with the focus placed on the specific absorption rate (SAR), which only refers to emissions from mobile phones that can heat biological tissue,” she said.

Indeed, in 2013, a team of researchers [evaluated SAR](#) as a method for quantifying the possible biological effects from electromagnetic fields and concluded that “SAR actually refers to thermal effects, while the vast majority of the recorded biological effects from man-made non-ionizing environmental radiation are non-thermal.”

“Even if SAR could be accurately estimated for a whole tissue, organ, or body, the biological/health effect is determined by tiny amounts of energy/power absorbed by specific biomolecules, which cannot be calculated,” they added.

Similarly, Philips questioned the researchers’ choice of methodology. “Are 24-hr. whole-body SAR totals (assuming they are realistic which is dubious) a relevant exposure metric for exposures under ICNIRP [International Commission on Non-Ionizing Radiation Protection] levels?” he asked.

“I think not,” Philips added.

Commenting on the researcher’s finding of increased radiation in the temporal lobe of the brain, Philips noted, “The temporal and frontal lobes are where most [GBM \[glioblastoma\]](#) tumors arise.”

The researchers did not discuss the risk of tumors in their study.

Philips also pointed out that the researchers did not take into consideration RF-EMF exposure during the night. “Many have their handset on standby under the pillow or next to them overnight so that they don’t miss messages from friends,” he said.

According to O’Connor, the study also fails to address and reference [official U.K. guidance](#) for children on reducing RF-EMF exposure from cellphones.

O’Connor said, “The time has come and as a matter of urgency to demand the inclusion of truly independent scientists.”

She added:

“It is not acceptable to exclude scientific research that exposes the inconvenient truth when making critical and important decisions while accepting flawed industry-funded poor quality papers to support the short-term economic interests of today.

“Delay and denial may hold enormous ramifications beyond imaginable proportions for public health and the environment.

“It is not just the citizens at risk today, but future generations due to the epigenetic properties this agent carries. Ignoring this situation today will lead to a false economy and a public health crisis due to the impact this technology is having on public health and the environment.

“The public may have no alternative but to make a criminal complaint against decision makers and seek prosecution and claims for compensation. Decision makers who fail to

protect public health should be held personally responsible for this serious breach of duty and put on notice for betraying the public trust by ignoring the overwhelming evidence on the hazards of RF-EMF.”

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