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How dangerous are smartphones really?

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Is the smartphone actually the greatest health risk of our time and responsible for the rising rates of cancer, Alzheimer's, and neuropsychological damage? This is a question that the WHO immediately dismisses as a "conspiracy theory," which is why it needs attention all the more urgently.

Smartphones are ubiquitous. They have become as much a part of people's lives as their clothes; those who don't have one are increasingly marginalized by society. The WHO and others regularly claim that smartphones have no harmful effects on health. Safe and effective – and definitely not something to think about. The smartphone as a central tool for building the digital prison must not be questioned, and certainly not in terms of health risks.

One person who does question it is the American biochemist Dr. Martin Pall. He sees significant health risks from electromagnetic fields (EMFs) from smartphones and wireless communication. Pall, professor emeritus at Washington State University, criticizes the current

safety guidelines and limits as completely inadequate and backs up his theories with his own research, among other things.

Pall distinguishes between natural and artificially generated EMFs. "Electronically generated electromagnetic fields are coherent, meaning they are emitted in a specific vector direction with a specific polarity, phase, and frequency, while most natural EMFs are incoherent," he [explained in a recent lecture](#). This coherence generates strong electric and magnetic forces that trigger biological effects—in contrast to natural fields.

The mechanism primarily acts via voltage-dependent calcium channels (VGCC) in the cells. "The forces on the voltage sensor activate these channels, open them, and lead to biological effects," says Pall. Calcium channels are particularly affected, as a massive influx of calcium into the cells has enormous consequences.

Pall attacks the guidelines of the International Commission on Non-Ionizing Radiation Protection (ICNIRP). These are based exclusively on thermal effects, i.e., heating of tissue, and ignore non-thermal effects. "All of these so-called protection standards are structured in this way. The permissible values are based solely on thermal effects. All effects caused by electrical and time-varying magnetic forces are completely ignored." In addition, the guidelines are absurd: higher limits for occupational exposure and different values for whole-body or partial-body exposure make no sense in terms of cellular mechanisms. "The entire structure of the safety guidelines is wrong. It simply doesn't make sense."

Pall cites a number of health effects: neuropsychiatric disorders such as insomnia, fatigue, depression, headaches, concentration problems, and anxiety—many of these conditions are now widespread. [Pall published a study on this topic in 2016.](#)

"You get insomnia, fatigue, depression, headaches, lack of concentration, cognitive dysfunction, anxiety, stress, agitation, and memory problems." In schools with Wi-Fi, concentration problems have been observed in students.

He also sees smartphones as the cause of declining fertility. "There is lower libido, lower hormone levels, and reduced activity in the testicles, which affects sperm quality." [TKP has reported on the sperm crisis](#), and Pall offers another explanation, which he [discusses in a 2018 research paper](#).

Experiments showed reduced motility, abnormal morphology, and increased apoptosis in sperm. Sperm counts are declining worldwide; a study in mice showed irreversible infertility. However, sperm counts were declining long before the introduction of smartphones, so it cannot be attributed solely to EMF.

Pall also sees cancer and Alzheimer's as possible consequences: "44 published reviews argue that EMF causes cancer." Brain tumors occur more frequently on the side where the cell phone is held. On Alzheimer's: "I have published a paper with 18 different types of evidence that collectively show that EMF causes Alzheimer's, including extremely early-onset Alzheimer's."

The biochemist considers the topic to be absolutely central to health science. He concludes his lecture with an appeal:

"EMFs are very important for almost everything we have seen in the world over the past 25 years. We need to take these things with exceptional seriousness, otherwise we will get into trouble – and I believe we are already deep in it."

Pall warned as early as 2018 about the consequences of 5G, which has now been rolled out on a very large scale. Work on 6G has already begun. [TKP reports regularly on the dangers of electromagnetic fields.](#)