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## Switzerland: Dead Tired But Wide Awake: Testimony of Electrohypersensitivity

**Articles from the Swiss German media on electrosmog are much more thorough than those in the Suisse romande (French-speaking) press. This one is excellent.**

**Electrosmog: Dead tired but wide awake** by [Bettina Dyttrich](#) (text) und Tamara Janes (photos), *Die Wochenzeitung*, 24 January 2013 (translated from German by Google and the Editor of this blog - updated 2 March 2014)

Anytime, anywhere online - this has its price. Electromagnetic pollution has increased enormously. Electrosensitive persons can barely live in towns, and doctors are warning about it.

"From a technical point of view I have to say that mobile technology is awesome. You can move freely anywhere. Even in an emergency you have a connection - . Tiptop »

It is easy to imagine Marcel Bolli as a cell phone freak: Technology plays an important role in his life. He learned mechanics and retrained later on the computer. For a long time, he enthusiastically rode a motorbike.

But Marcel Bolli now has no cell phone. He has no cordless phones and no wireless systems (WLAN). The 38-year-old from Schaffhausen is electrosensitive: He is allergic to so-called non-ionizing radiation (NIR).

And it is now ubiquitous. Mobile phones are no longer used only for phone calls and text messages, but also to surf on the Internet and to download. Soon every household will have a wireless router, many cities want to offer Wi-Fi in public spaces so that everyone can access the internet, any time, anywhere. There are also high voltage power lines, the overhead lines of trains and other power lines, but in much lower frequencies.

### Out of sheer fear?

Mostly it begins with a burning sensation on the scalp. Then the upper body feels like it is coming off. "The chest is squeezed", as Marcel Bolli describes it. "The whole body is restless." If he spends several hours in areas that are heavily polluted with NIR, in the evening, his muscles begin to shake uncontrollably. Then he sleeps only a few hours. And the next day he has trouble concentrating. That is why he tries to avoid cities as much as possible. "I'm pretty limited in my options, you could say."

However, many people do not take electrosensitive persons seriously. They are regarded as



hypochondriacs who develop symptoms of fear of mobile phone radiation, or are accused of being "misdirected", seeking reasons for their complaints in the wrong place.

"Quite clearly: There are people who suffer from electromagnetic fields," says Yvonne Gilli. The physician and Green Party National Councilor from the small St. Gallen town of Wil is a member of Physicians in Favor of the Environment and for years has been seeing patients who attribute their complaints to NIR. It is important to precisely clarify each case. To this end, she works with professionals who measure electromagnetic fields in the home of the patient. "Sometimes the cause of the complaints lies completely elsewhere. Sometimes the suspicion is also plausible." Gilli mentions a patient with severe cardiovascular reactions and depression. Measurements showed that she was affected by three mobile antennas. "She moved and quickly regained health. And it remained."

The doctor believes that NIR depression not only affects one indirectly - such as lack of sleep - but also can directly trigger symptoms: "The radiation alters the electrophysiology of the brain, which can be seen in brain wave measurements. I think it is plausible that this can alter the biochemistry, even if it is not yet proven. Most important in the treatment is a resource-oriented approach." There is nothing worse than when people get sick and cannot do anything about it. As soon as you can help to influence, even disturbing influences, one gets better." That's why Yvonne Gilli recommends reducing electrosmog, minimizing the stress anywhere where you can do so, from the cordless phone to the electric blanket. And support the metabolism with a healthy diet and regular periods of rest. Sometimes treatment with antidepressants is justified. "They also act on depression connected with electromagnetic pollution. But of course it affects the personality. "

### **Artificial bees**

Marcel Bolli has parked his car at the Schaffhausen Forest Cemetery. He used to live not far from there, in the neighborhood of Buchthalen. Bolli uses two devices: one indicates whether a wireless router is switched on nearby. The other, an Electrosmog Detector, translates NIR frequencies into sounds. "This device impresses many people, who believe electro-sensitivity doesn't exist. If they hear it, they notice: Because there really is something. "The Forest Cemetery air seems to be pure. Only a barely audible, fine noise is heard."

Electromagnetic pollution emanates from all devices and antennas.

On the way to Buchthalen, there is a tall apartment block with a cell phone antenna in sight, the electrosmog detector begins to give a high, unpleasant sound, similar to radio interference noises. In the block, Marcel Bolli measures fifteen switched on WLANs (Wi-Fi) – his device cannot show more. The wireless frequency sounds deeper, like a swarm of artificial bees.

Bolli's former residence is ideal: in a small valley that descends to the Rhine. .Mobile antennas are neither visible nor heard. But even here, there is the low hum of Wi-Fi.

It began four years ago: Marcel Bolli worked in radiology in the Thurgau Hospital. He could not sleep. "At night I was dead tired, but wide awake.» The family doctor gave him sleeping pills which did not help much. Completely exhausted, he collapsed in the spring of 2009 and was hospitalized. A psychiatric examination did not yield any explanation.

Then a fête was held in Altdorf, the small village of Schaffhausen on the German border, where Bolli grew up. He went and stayed with his parents - and was able to sleep. This made him think. "So I experimented with sleeping." When on an alp high above Lake Walen, a place with no cell phone reception, he slept better than he had in years. "In the Thurgau Hospital, all internal communication is carried out over wireless phones. This is handy, but it takes tons of access points, often several per room." At work, his head burned like after being exposed to too much sun. Little red dots formed. "The dermatologist found it pretty disturbing." Bolli said. The next job in Schaffhausen brought no relief. In autumn 2009, tinnitus also began to torment him. Today he lives in Altdorf with his parents and is a self-employed computer scientist. He sleeps in a canopy made of cotton, woven with fine metal threads. They keep out a large part of the radiation.

Peter Schlegel, of the organization Bürgerwelle that supports electrosmog sufferers, knows dozens of people like Marcel Bolli. He estimates that ten to fifteen percent of the population are electro-sensitive, though not all equally strong. "Cause and effect is clear. Many suffer for years and eventually find out by accident that electromagnetic pollution is the problem. "

### **Radiation-stressed cells**

It is a paradox: The NIR load is sharply increasing. In 2011, the World Health Organization classified the radiation as "possibly carcinogenic" but the debate is dead. At the turn of the millennium, when mobile phones were new, the media reported on it far more critically than in recent years. In today's reports - such as the new mobile generation LTE – it is often just a matter of how much power is available when.

"It will also be more difficult to get signatures for motions on electrosmog in Parliament," says National Councilor Yvonne Gilli. "One does not want to stand in the way of technical progress." And often, she hears that harmlessness has now been proven.

That's not true. It has been proven that NIR affects the human body at different levels. Cell phone radiation can alter brain waves, which is visible on the electroencephalogram (EEG). High-and low-frequency NIR changes processes in the cell nucleus and can break strands of the genetic material, the DNA. But this remains controversial: Are these changes dangerous? Can they promote cancer? Some studies suggest an increased risk of brain tumors. In 2012, an Italian court decided in favor of a manager who traced his tumor to the cell phone he had been using at work six hours a day for years. The strongest source of radiation for regular mobile phone users is the device itself.

Primo Schär, cancer researcher at the University of Basel, says: "Based on previous experiments, there is no explanation for a possible increased risk of cancer. It is clear that non-ionizing radiation does not generate unique mutations as does UV radiation or cigarette smoke. The effects are much more diffuse. On the one hand, this is reassuring, but on the other, it presents a challenge: Diffuse radiation is much more difficult to study."

Much of the research has focused on cancer. What about other health consequences? There are relatively few studies on electrohypersensitivity (EHS), and they have weaknesses:

- Many of these studies revolve around the question of whether EHS persons notice when they are exposed to the radiation. Conclusion: they cannot on average notice any better than other people. Many EHS also claim they cannot. You feel only delayed effects - says Marcel

Bolli –for instance, if one is trying to sleep.

- Examinations are held in cities: The load is already high on access routes. Marcel Bolli comments: "If I am spending several hours in a city, and afterwards, had to say whether a router is more or less on - I do not think I could."
- The tests have little to do with reality: It is mostly short exposures of 30 to 45 minutes at a single frequency. Most people today are exposed around the clock to varied frequencies of changing strengths.

The impact of this everyday stress has been researched very little. Swiss research within the National Research Program "Non-Ionising Radiation - Health and Environment" (NRP 57) examined the individual NIR load of 1,375 persons: "The environmental exposure to radiofrequency electromagnetic fields at the beginning of the study showed no association with health disorders which were registered one year later."

Unlike a study at the Medical University of Vienna. The researchers interviewed and examined 365 persons in the vicinity of mobile phone base stations in Vienna and in rural areas of Carinthia. They were very careful. Hans-Peter Hutter, professor at the Institute for Environmental Health, said: "Antennas, against which there had been protests, were avoided." Respondents also did not know this concerned mobile telephony: "We said we are collecting various environmental factors such as air quality." Researchers tested, among others, the response time of the study participants, they asked about their health and their assessment of the risks of these environmental factors. "It turned out that fears about mobile antennas were not very big."

The researchers measured the NIR load in the bedrooms of the respondents. With clear results: higher loaded residents suffered some headaches and difficulty concentrating. "Sleep quality was worse at higher load," says Hans-Peter Hutter. The analysis showed, however, that during sleep, the fears would have had a greater impact than the load. But was it really just the fear that robbed the people of sleep? The question arises: How many people suffer from NIR, without knowing it? Is the boundary between EHS and "normal" less clear than we think?

### **Three years with a mobile phone**

The reactions to the study were violent Hutter says: "Immediately, there were accusations of scaremongering, often by groups who themselves had not made any single epidemiological study. But no one has thrown away the phone because of our study. When it comes to a lot of money, independent science has a hard time, and when mobile telephony is extremely noticeable." He is used to that. "We carry out studies on chemicals at the Institute for Environmental Hygiene. Then the corresponding industry also does reports and says it's all wrong."

Hutter's colleague Michael Kundi, who was involved in the study, belongs to Bioinitiative, an international group of 29 scientists who warn against the proliferation of NIR. In a lecture, Kundi said scientific controversy has been around since the thirties "about the nature of the interaction between radio frequency fields and organisms." This controversy has never been a purely scientific matter. "During the fifties, because of the military importance of radar, in the sixties, because of the political importance of television, today, because of the economic

importance of mobile telephony." A study by the University of Bern showed that entirely or partially publicly-funded research more frequently reports NIR effects than studies funded purely by industry.

Hans-Peter Hutter says, until today, only 25 to 30 studies have been published in scientific journals on the health effects of mobile phone base stations worldwide. "Austrian providers like to write, there are thousands of studies on the topic. That is simply not true. Even that is completely distorted."

What troubles him, "is that we resorted to wireless applications, without asking whether it is useful and necessary, or - only a gimmick. There is no public debate. Even three-year-olds come to the nursery with a cell phone..." And also, the commodity issue should not be forgotten: "Some essential raw materials such as tantalum come from Africa, a massive reason for carrying on war. We have a responsibility, as well as for electronic waste. "

It is not a question of demonizing NIR says Hutter. "We just say, there are effects that must be taken seriously in view of the immense spread of mobile telephony, the research work is huge, however, for the sake of precaution we should take urgent measures."

Yvonne Gilli agrees. Close collaboration between doctors and science is necessary, she says: "We should gather the cases of people with electrosmog complaints into a central database so that the many individual cases are statistically significant."

Medical experience clearly shows that there are particularly sensitive people: "For them, if the stimulus filter is adjusted differently to some extent, they suffer less. Often they also react strongly to chemicals." Such complaints are now referred to as "multiple chemical sensitivity " (MCS). The cause is not mental health problems, says Gilli, but peculiarities of the nervous system and thereby an altered metabolism. "Twenty years ago there were many more ways to avoid this overstimulation. With mobile phones, it has become much harder for these people."

### **Thank the Rhine**

"Here, the load is massive," says Marcel Bolli, as we get into the narrow streets of the old town of Schaffhausen. Presumably there are many wireless systems in offices and shops. "Now I can feel it on the head." We climb to Herrenacker where the Schaffhausen tourism office has a public access point set up. On the way Bolli loses the thread of the conversation: "Now I do not know what I wanted to say." The radiation makes him so distracted that he almost dares not to drive a car. He has given this up for some time.

At the bus stops there are young people with smartphones. The electrosmog detector is booming, as we pass. Then the train tracks come into view, before three roofs with multiple antennas. The roar is deafening.

Running water helps, says Marcel Bolli. In the summer he bathes almost every night in the Rhine. Then he sleeps better. Now, in winter, he takes a shower for ten minutes before he crawls into the canopy. This relieves the burning sensation on the scalp. Sometimes he dreams of a house in a remote valley, where the radiation cannot reach him. Or he wonders if he should be a winemaker. The physical work would please him. "But I would have to go to school for training. The load on the road would be high, and there they would certainly have

Wi-Fi. So I cannot learn. "

### The warning of scientists

29 researchers warn: "People are bioelectrical systems. Artificial electromagnetic fields can influence fundamental biological processes in the human body." There is sufficient evidence that these fields could be harmful.

The scientists from ten countries, including the Vienna medical professor Michael Kundi (see main text) have worked on an overview of the research on non-ionizing radiation. At the end of December 2012, they published the results in the second "Bioinitiative Report". The 1,500-page document is comprehensible only for professionals, but the conclusions are aimed at the general population. Included among the mentioned health risks in addition to cancer are an increased susceptibility to autism in children, effects on fetuses, metabolism, the immune system and brain functions.

Since the first report in 2007, the situation has worsened: "Many more people are involuntarily exposed to radiation as well as people who deliberately do not use wireless systems. You can hardly avoid it." A "Wireless Tsunami" is necessary to reconsider less harmful forms of communication: For almost any wireless application there are wired solutions.

[The article concludes with an explanation of electrosmog.]

Original article in German:

<http://www.woz.ch/1304/elektrosmog/todmuede-aber-hellwach>

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**My name is Meris. Through these articles, I would like to raise awareness of health and environment issues in order to better protect ourselves, our children and future generations. See also my Website in French [Mieux Prévenir](#). For information in other languages, see [my Facebook page](#).**