

From: Lindee Hoshikawa | Poncho Music [<mailto:mailponchomusic@gmail.com>]

Sent: Friday, July 21, 2017 2:06 PM

To: Smith, Randy L. (Commissioner) <R.Smith@chelanpud.org>; Arseneault, Garry <Garry.Arseneault@chelanpud.org>; Bolz, Dennis <Dennis.Bolz@chelanpud.org>; Congdon, Ann <ann.congdon@chelanpud.org>; McKenna, Steve <Steve.McKenna@chelanpud.org>

Cc: Hartman, Suzanne <Suzanne.Hartman@chelanpud.org>

Subject: We Oppose the Smart Grid

Chelan County PUD IT Warning:

Please use caution! This is an external email with links or attachments.

Dear Chelan County PUD,

Commissioners- Ann, Randy, Garry, Dennis and Steve:

First, I would like to thank you for your time and dedication to hearing-out each and every one of us who are concerned about the Advanced Metering System.

We do not want to be on a Smart Grid. We do not give our consent to have a smart meter on our home. We are opposed to this technology and we know it is our right to have our voices be heard when we say "NO" to advanced meters using wireless technology. We have obtained written consent from the legal homeowners at 5787 Campbell Road, Peshastin, giving us, the tenants, the right to refuse the installment of any smart or advanced meters on this property. (See attached).

There are many reasons why we are against this proposal. I would be happy to further this conversation with you, if the issue would be put on the agenda for an upcoming meeting. We are actively engaged with our community members regarding this issue and are speaking out to you now. For your information, attached are some abstracts of recently published, peer-reviewed scientific studies (mostly from 2017 and 2016) proving newly understood health-risks of the 900MHz radio frequency (wireless network). Please take the time to read and consider the risks for everyone.

The reasoning that the meters are "well below the FCC standards" is simply not a viable justification for the use of these devices. Also, the popular reasoning that "It's everywhere already" is simply illogical and does not make adding more RF Radiation to our lives OK. Personally, our home is free of Wi-Fi, we keep our cell phones on "airplane mode" unless using them (hands-free, on speaker phone and one foot away), and we actively choose not to engage in the consumption of wireless technology on a daily basis. We would like to preserve our constitutional right to continue our lives in this way. The Advanced Metering System will violate this ability, and therefore, it will violate our rights.

I would like to urge the commissioners to read the following site regarding outdated FCC guidelines for RF-Radiation exposure safety:

<https://ehtrust.org/policy/fcc-safety-standards/>

Are the Commissioners aware that the current FCC guidelines for exposure limits are 100 times higher than China and Russia, and 100,000 times higher than Austria's precautionary limit?

Another concern is the harvesting of micro-data. This is a gold mine for data-collecting industries. We would like to ask one simple "Yes or No" question: *Will the PUD be selling harvested data to companies? Will there be financial gain for the PUD if the county goes fully on the Smart Grid? Yes, or No?*

One more "ask" from us to the PUD, is that you please publicly (webpage) disclose any areas/neighborhoods that have existing advanced meters already integrated into the Smart Grid. Please disclose *where* and *when* these smart meters in Chelan County were implemented.

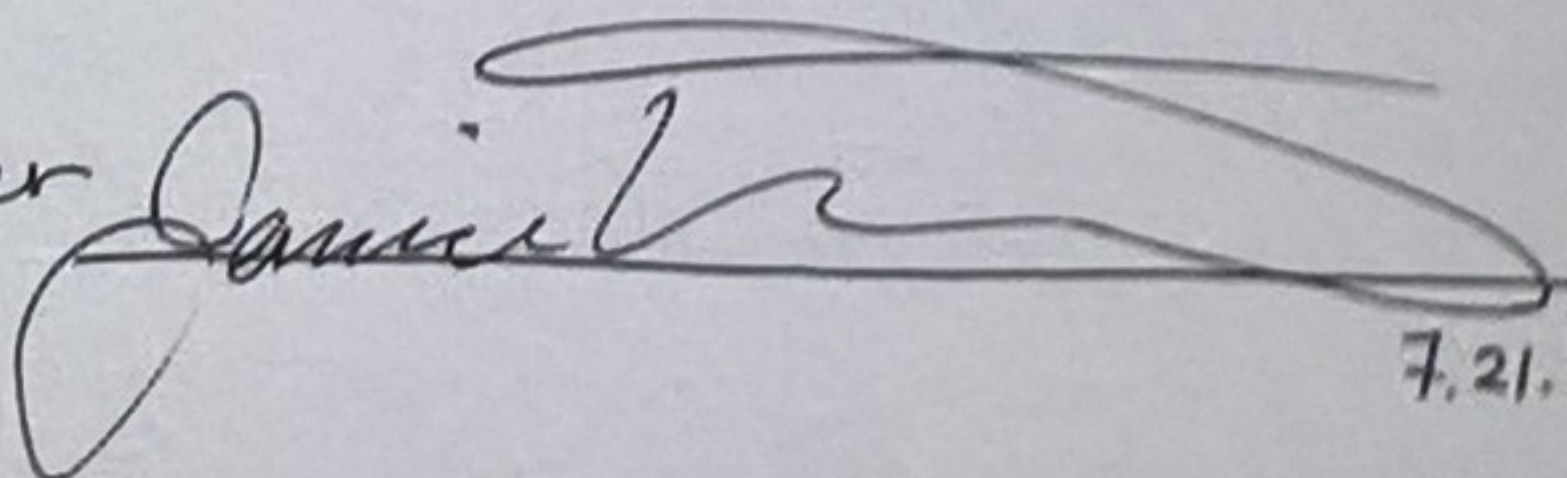
Thank you for fully engaging with this letter by reading, answering and responding. We look forward to further discussion,

Lindee Hoshikawa and Sergio Cuevas
(Janice Turner and Gary Planagan- homeowners)
5787 Campbell Road, Peshastin, WA 98847
206-852-1049

July 21st 2017

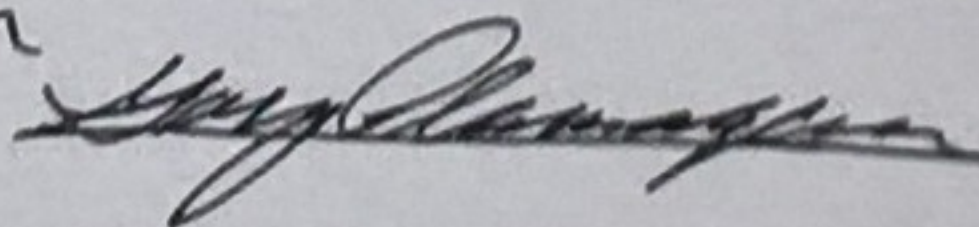
The homeowners at 5787 Campbell Rd. Peshastin
98847, gives the tenants of this house,
Lindee Hoshikawa and Sergio Cuevas, the
right to refuse the installment of
any Smart Meter (Advanced Metering System).

Janice Turner



7.21.2017

Gary Planagan



7.21.2017

Mitochondrial DNA damage and oxidative damage in HL-60 cells exposed to 900MHz radiofrequency fields.

[Sun Y](#)¹, [Zong L](#)¹, [Gao Z](#)¹, [Zhu S](#)², [Tong J](#)¹, [Cao Y](#)³.

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Abstract

HL-60 cells, derived from human promyelocytic leukemia, were exposed to continuous wave 900MHz radiofrequency fields (RF) at 120 μ W/cm² power intensity for 4h/day for 5 consecutive days to examine whether such exposure is capable of damaging the mitochondrial DNA (mtDNA) mediated through the production of reactive oxygen species (ROS). In addition, the effect of RF exposure was examined on 8-hydroxy-2'-deoxyguanosine (8-OHdG) which is a biomarker for oxidative damage and on the mitochondrial synthesis of adenosine triphosphate (ATP) which is the energy required for cellular functions. The results indicated a significant increase in ROS and significant decreases in mitochondrial transcription factor A, mtDNA polymerase gamma, mtDNA transcripts and mtDNA copy number in RF-exposed cells compared with those in sham-exposed control cells. In addition, there was a significant increase in 8-OHdG and a significant decrease in ATP in RF-exposed cells. The response in positive control cells exposed to gamma radiation (GR, which is also known to induce ROS) was similar to those in RF-exposed cells. Thus, the overall data indicated that RF exposure was capable of inducing mtDNA damage mediated through ROS pathway which also induced oxidative damage. Prior-treatment of RF- and GR-exposed cells with melatonin, a well-known free radical scavenger, reversed the effects observed in RF-exposed cells.

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KEYWORDS:

8-Hydroxy-2'-deoxyguanosine; Mitochondrial DNA damage; Oxidative damage; Radiofrequency fields; Reactive oxygen species

Habits of cell phone usage and sperm quality - does it warrant attention?

[Zilberlicht A](#)¹, [Wiener-Megnazi Z](#)², [Sheinfeld Y](#)², [Grach B](#)², [Lahav-Baratz S](#)², [Dirnfeld M](#)².

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Abstract

Male infertility constitutes 30-40% of all infertility cases. Some studies have shown a continuous decline in semen quality since the beginning of the 20th century. One postulated contributing factor is radio frequency electromagnetic radiation emitted from cell phones. This study investigates an association between characteristics of cell phone usage and semen quality. Questionnaires accessing demographic data and characteristics of cell phone usage were completed by 106 men referred for semen analysis. Results were analysed according to WHO 2010 criteria. Talking for ≥ 1 h/day and during device charging were associated with higher rates of abnormal semen concentration (60.9% versus 35.7%, $P < 0.04$ and 66.7% versus 35.6%, $P < 0.02$, respectively). Among men who reported holding their phones ≤ 50 cm from the groin, a non-significantly higher rate of abnormal sperm concentration was found (47.1% versus 11.1%). Multivariate analysis revealed that talking while charging the device and smoking were risk factors for abnormal sperm concentration (OR = 4.13 [95% CI 1.28-13.3], $P < 0.018$ and OR = 3.04 [95% CI 1.14-8.13], $P < 0.027$, respectively). Our findings suggest that certain aspects of cell phone usage may bear adverse effects on sperm concentration. Investigation using large-scale studies is thus needed.

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KEYWORDS:

cell phone; male infertility; sperm concentration

The influence of direct mobile phone radiation on sperm quality.

[Gorpinchenko I](#)¹, [Nikitin O](#)², [Banyra O](#)³, [Shulyak A](#)¹.

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Abstract

INTRODUCTION:

It is impossible to imagine a modern socially-active man who does not use mobile devices and/or computers with Wi-Fi function. The effect of mobile phone radiation on male fertility is the subject of recent interest and investigations. The aim of this study was to investigate the direct in vitro influence of mobile phone radiation on sperm DNA fragmentation and motility parameters in healthy subjects with normozoospermia.

MATERIAL AND METHODS:

32 healthy men with normal semen parameters were selected for the study. Each sperm sample was divided into two equal portions (A and B). Portions A of all involved men were placed for 5 hours in a thermostat, and portions B were placed into a second thermostat for the same period of time, where a mobile phone in standby/talk mode was placed. After 5 hours of incubation the sperm samples from both thermostats were re-evaluated regarding basic motility parameters. The presence of DNA fragmentation in both A and B portions of each sample was determined each hour using a standard sperm chromatin dispersion test.

RESULTS:

The number of spermatozoa with progressive movement in the group, influenced by electromagnetic radiation, is statistically lower than the number of spermatozoa with progressive movement in the group under no effect of the mobile phone. The number of non-progressive movement spermatozoa was significantly higher in the group, which was influenced by cell phone radiation. The DNA fragmentation was also significantly higher in this group.

CONCLUSIONS:

A correlation exists between mobile phone radiation exposure, DNA-fragmentation level and decreased sperm motility.

KEYWORDS:

DNA fragmentation; electromagnetic radiation; mobile phones; sperm motility

Recent reports of Wi-Fi and mobile phone-induced radiation on oxidative stress and reproductive signaling pathways in females and males.

[Nazıroğlu M¹](#), [Yüksel M](#), [Köse SA](#), [Özkaya MO](#).

Author information

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Abstract

Environmental exposure to electromagnetic radiation (EMR) has been increasing with the increasing demand for communication devices. The aim of the study was to discuss the mechanisms and risk factors of EMR changes on reproductive functions and membrane oxidative biology in females and males. It was reported that even chronic exposure to EMR did not increase the risk of reproductive functions such as increased levels of neoantigens abort. However, the results of some studies indicate that EMR induced endometriosis and inflammation and decreased the number of follicles in the ovarium or uterus of rats. In studies with male rats, exposure caused degeneration in the seminiferous tubules, reduction in the number of Leydig cells and testosterone production as well as increases in luteinizing hormone levels and apoptotic cells. In some cases of male and female infertility, increased levels of oxidative stress and lipid peroxidation and decreased values of antioxidants such as melatonin, vitamin E and glutathione peroxidase were reported in animals exposed to EMR. In conclusion, the results of current studies indicate that oxidative stress from exposure to Wi-Fi and mobile phone-induced EMR is a significant mechanism affecting female and male reproductive systems. However, there is no evidence to this date to support an increased risk of female and male infertility related to EMR exposure.

PMID:

24105626

DOI:

[10.1007/s00232-013-9597-9](https://doi.org/10.1007/s00232-013-9597-9)

[Indexed for MEDLINE]

Radio frequency electromagnetic radiation (RF-EMR) from GSM (0.9/1.8GHz) mobile phones induces oxidative stress and reduces sperm motility in rats.

[Mailankot M¹](#), [Kunnath AP](#), [Jayalekshmi H](#), [Koduru B](#), [Valsalan R](#).

Author information

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Department of Biochemistry, Melaka Manipal, Medical College, Manipal, India.

Abstract

INTRODUCTION:

Mobile phones have become indispensable in the daily lives of men and women around the globe. As cell phone use has become more widespread, concerns have mounted regarding the potentially harmful effects of RF-EMR from these devices.

OBJECTIVE:

The present study was designed to evaluate the effects of RF-EMR from mobile phones on free radical metabolism and sperm quality.

MATERIALS AND METHODS:

Male albino Wistar rats (10-12 weeks old) were exposed to RF-EMR from an active GSM (0.9/1.8 GHz) mobile phone for 1 hour continuously per day for 28 days. Controls were exposed to a mobile phone without a battery for the same period. The phone was kept in a cage with a wooden bottom in order to address concerns that the effects of exposure to the phone could be due to heat emitted by the phone rather than to RF-EMR alone. Animals were sacrificed 24 hours after the last exposure and tissues of interest were harvested.

RESULTS:

One hour of exposure to the phone did not significantly change facial temperature in either group of rats. No significant difference was observed in total sperm count between controls and RF-EMR exposed groups. However, rats exposed to RF-EMR exhibited a significantly reduced percentage of motile sperm. Moreover, RF-EMR exposure resulted in a significant increase in lipid peroxidation and low GSH content in the testis and epididymis.

CONCLUSION:

Given the results of the present study, we speculate that RF-EMR from mobile phones negatively affects semen quality and may impair male fertility.

KEYWORDS:

Electromagnetic radiation; Mobile phone; Oxidative Stress; Rats; Sperm motility

Electromagnetic Fields, Pulsed Radiofrequency Radiation, and Epigenetics: How Wireless Technologies May Affect Childhood Development.

Sage C1, Burgio E2.

Author information

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International Society of Doctors for Environment (ISDE) Scientific Office.

Abstract

Mobile phones and other wireless devices that produce electromagnetic fields (EMF) and pulsed radiofrequency radiation (RFR) are widely documented to cause potentially harmful health impacts that can be detrimental to young people. New epigenetic studies are profiled in this review to account for some neurodevelopmental and neurobehavioral changes due to exposure to wireless technologies. Symptoms of retarded memory, learning, cognition, attention, and behavioral problems have been reported in numerous studies and are similarly manifested in autism and attention deficit hyperactivity disorders, as a result of EMF and RFR exposures where both epigenetic drivers and genetic (DNA) damage are likely contributors. Technology benefits can be realized by adopting wired devices for education to avoid health risk and promote academic achievement.

Vitamin C and Vitamin E Protected B95-8 and Balb/c-3T3 Cells from Apoptosis Induced by Intermittent 50Hz ELF-EMF Radiation.

Ding Z¹, Li J^{1,2}, Li F^{1,2}, Mephyrar MM^{1,2}, Wu S¹, Zhang C³, Zeng Y^{1,2}.

Author information

Abstract

BACKGROUND:

The extremely low-frequency electromagnetic field (ELF-EMF), mainly emitted by electric transmission lines and household electronic appliances, is becoming a worldwide health risk. It is imperative to investigate the biological impacts of ELF-EMF and to identify products that are resistant to the radiation from 50 Hz ELF-EMF. In this study, we investigated the biological impacts of apoptosis caused by 50 Hz Power line ELF-EMF and the protective effects of Vit C and Vit E.

METHODS:

We conducted this study in Beijing, China in 2013. B95-8 and Balb/c-3T3 cells were divided into a sham group, an expo group and 3 expo groups in which the cells were preincubated with various concentrations of Vit C and Vit E. Then, all of the cells were exposed to 50 Hz Power line ELF-EMF and examined for apoptosis. The cells were collected for apoptosis detection after exposure.

RESULTS:

The percent of cells that undergoing apoptosis and preincubated with various concentrations of Vit C and Vit E were significantly lower than in the Expo group.

CONCLUSION:

Vit C and Vit E exert significant protective effects from 50 Hz ELF-EMF radiation. The optimal protective concentrations of Vit C and Vit E are 10 $\mu\text{mol/L}$ and 25 $\mu\text{mol/L}$, respectively. The protective effect of vitamins was more apparent for Balb/c-3T3 cells than B95-8cells.

KEYWORDS:

Apoptosis; Extremely low frequency; Vitamin C; Vitamin E

When theory and observation collide: Can non-ionizing radiation cause cancer?

Havas M1.

Author information

Abstract

This paper attempts to resolve the debate about whether non-ionizing radiation (NIR) can cause cancer—a debate that has been ongoing for decades. The rationale, put forward mostly by physicists and accepted by many health agencies, is that, "since NIR does not have enough energy to dislodge electrons, it is unable to cause cancer." This argument is based on a flawed assumption and uses the model of ionizing radiation (IR) to explain NIR, which is inappropriate. Evidence of free-radical damage has been repeatedly documented among humans, animals, plants and microorganisms for both extremely low frequency (ELF) electromagnetic fields (EMF) and for radio frequency (RF) radiation, neither of which is ionizing. While IR directly damages DNA, NIR interferes with the oxidative repair mechanisms resulting in oxidative stress, damage to cellular components including DNA, and damage to cellular processes leading to cancer. Furthermore, free-radical damage explains the increased cancer risks associated with mobile phone use, occupational exposure to NIR (ELF EMF and RFR), and residential exposure to power lines and RF transmitters including mobile phones, cell phone base stations, broadcast antennas, and radar installations.

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KEYWORDS:

Cancer; Free radicals; Non-ionizing radiation; Oxidative stress