

Webinar am 4. Juni 2020

Elektromagnetische Strahlung und Gesundheit

5G und Covid-19*

Dr. med. Dietrich Klinghardt

PP in engl. Sprache



Is the current electromagnetic environment responsible for chronic illness, extinction of entire species, global warming and general madness?

- It has been calculated, that 50% of the population today will die with or of degenerative brain disease. M.Alzheimer has been shown to be directly related to the exposure to **microwave** (O.Johannsen 2006) and also to the presence of **Lyme spirochetes (J.Miklossy)** and viral **infections in the brain** and to **aluminium/mercury in the CNS** (many reports)
- The “health span” has decreased in the last 20 years by 10 years and is exponentially shortening
- In the last few years, 80% of insects and 75% of songbirds have vanished – but only in areas with “good” cellphone coverage (which is now blanketing the western world)
- The number of autistic children increases every 5 years and by 2025 50% of the children born may be diagnosed with a life long neuro-developmental disorder by the time they reach the age of 4 (Stephanie Seneff PhD). Autism has been linked to both gestational exposure to **toxins, infectious pathogens and electromagnetic radiation** (EMR). This author detected a gestational microwave exposure in autistic children over 20 times higher than in the neurotypical children
- **There is a potent synergy between toxins, pathogens and microwave. Is it intentional?**



In the US , in women the cause of “death by neurological disease” has increased 663 % in the last 20 years

“Neurological deaths of American adults (55–74) and the over 75's by sex compared with 20 Western countries 1989–2010: Cause for concern” [Colin Pritchard](#), [Emily Rosenorn-Lanng](#)
Surg Neurol Int 23-Jul-2015;6:123

Abstract

Background: Have USA total neurological deaths (TNDs) of adults (55-74) and the over 75's risen more than in twenty Western Countries

Methods: World Health Organization TND data are compared with control mortalities cancer mortality rates (CMRs) and circulatory disease deaths (CDDs) between **1989-1991** and **2008-2010** and odds ratios (ORs) and confidence intervals calculated.

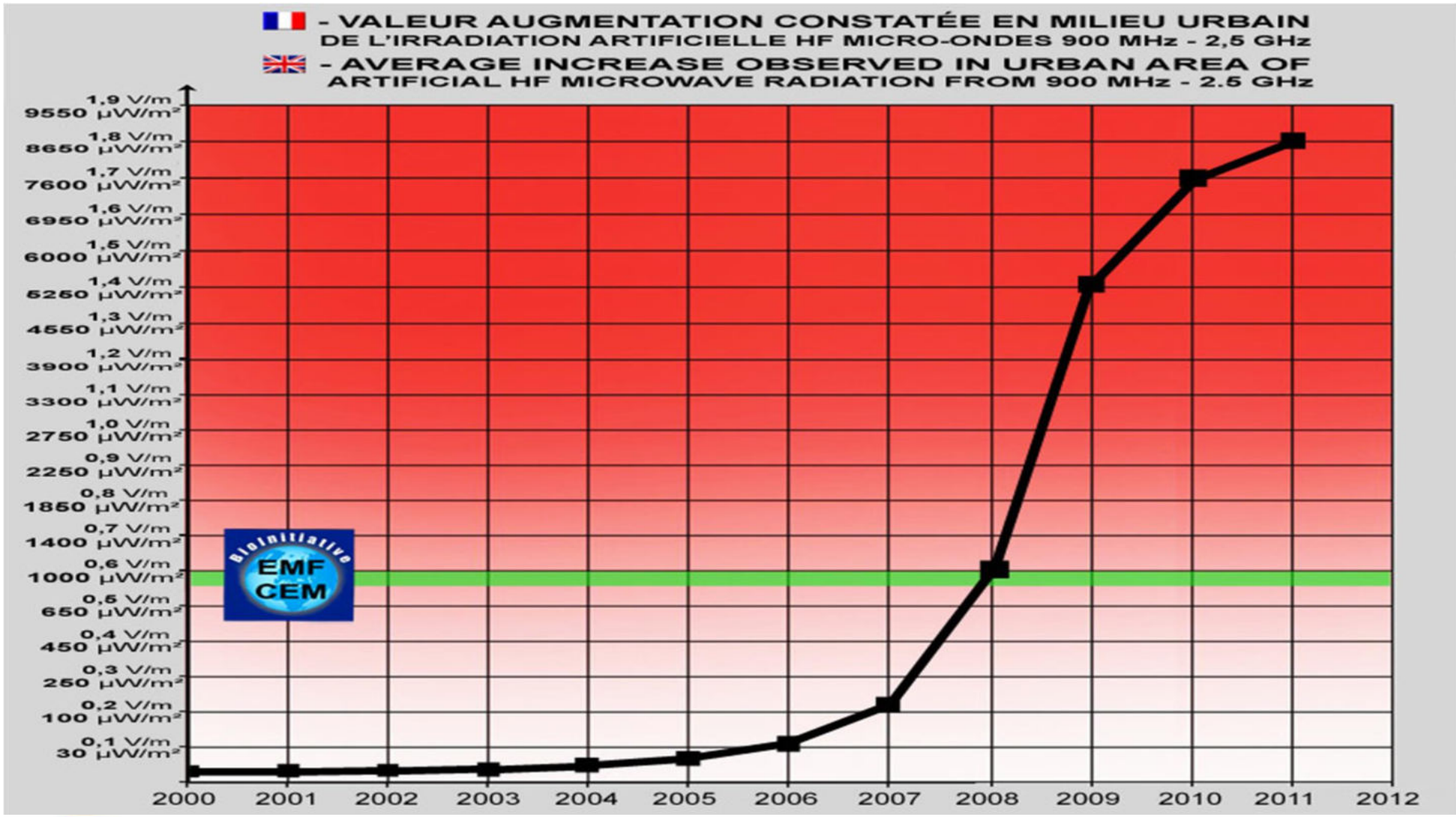
Results:Neurological Deaths -- Twenty country (TC) average 55-74 male rates per million (pm) rose 2% to 503 pm, USA increased by 82% to 627 pm. TC average females rose 1% to 390 pm, USA rising 48% to 560 pm. TC average over 75's male and **female** increased 117% and 143%; USA rising 368% and **663%**, significantly more than 16 countries. Cancer mortality -- Average 55-74 male and female fell 20% and 12%, USA down 36% and 18%. TC average over 75's male and female fell 13% and 15%, the USA 29% and 2%. Circulatory deaths -- TC average 55-74 rates fell 60% and 46% the USA down 54% and 53%. Over 75's average down 46% and 39%, USA falling 40% and 33%. ORs for rose substantially in every country. TC average 75's ORs for CMR: TND male and females were 1:2.83 and 1:3.04 but the USA 1:5.18 and 1:6.50. The ORs for CDD: TND male and females TC average was 1:3.42 and 1:3.62 but the USA 1:6.13 and 1:9.89.

Conclusions: Every country's neurological deaths rose relative to the controls, especially in the USA, which is a cause for concern and suggests possible environmental influences.

Keywords: Age, gender, international comparison, neurological deaths



Growth in Exposure to Microwave Radiation 2000-2010



May 20, 2020

This came across the news feed. A town in Connecticut is banning the rollout of 5G until there is more testing.
<https://www.wtnh.com/news/technology/easton-bans-5g-technology-rollout-citing-lack-of-research-testing>

Verified: Easton Connecticut, the first New England town to order Big Telecom to stop its 5G wireless rollout.

- On May 7, Easton's Town Selectmen, in a bi partisan vote, unanimously approved a resolution ordering those companies to "cease and desist" their buildout of 5g infrastructure until research and testing proves it safe for humans and the environment.
- The American Academy of Pediatrics and hundreds of medical and scientific experts have advised the Federal Communications Commission to test the long-term safety of 5G technology.
- A \$25 million FDA study in 2019 found "clear evidence of cancer and DNA damage" among myriad injuries known to be caused by 5g.
- The resolution presages a confrontation with the Telecom Titans.
- Should Telecom press forward, Easton can either deny or refuse to process applications.
- Easton's famed 5th Regiment played key roles in turning back Imperial Redcoats at Lexington and Concord and in subsequent Revolutionary War battles.
- First Selectman Dr. David Bindelglass told me that he and his fellow lawmakers took the action solely due to overwhelming public demand. Please send an Email to Dr. Bindelglass (dbindelglass@eastonct.gov) to thank all the Selectmen, Republican and Democrats, for their courage against corporate tyranny.

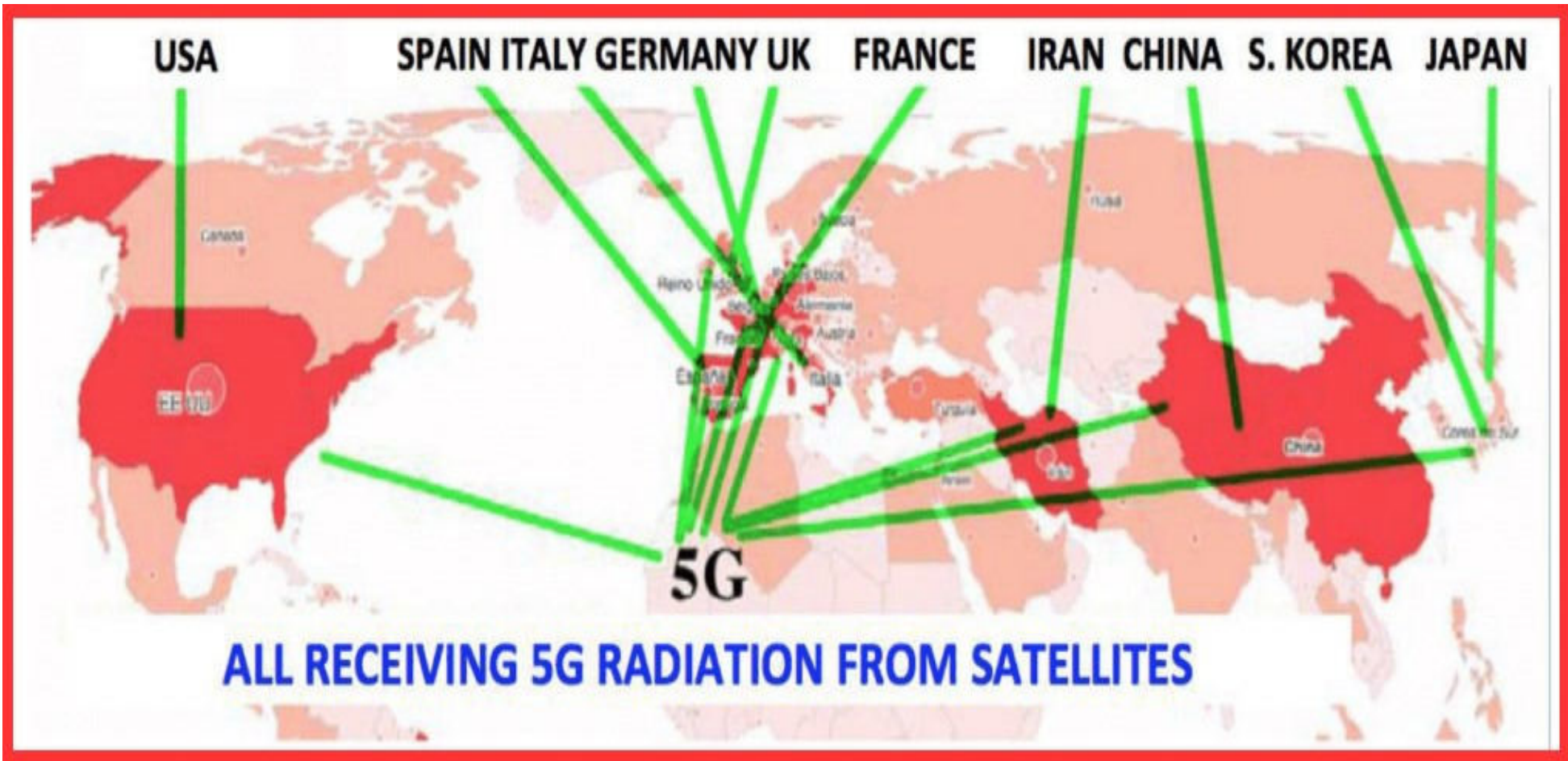
The 5G tech will employ low-(0.6 GHz – 3.7 GHz), mid-(3.7 – 24 GHz), and high-band frequencies (24 GHz and higher). The "high-band" frequencies largely consist of millimeter waves (MMWs), a type of [electromagnetic radiation](#) with wavelengths within 1- 10 millimeters and frequencies ranging from 30 to 300 GHz.



Study Shows Direct Correlation Between 5G Networks and “Coronavirus” Outbreaks

- The first study demonstrating a relationship between “coronavirus” outbreaks and the presence of 5G networks has emerged from Spain and is by Bartomeu Payeras i Cifre. Bartomeu is a biologist specializing in microbiology and is working at the University of Barcelona. His original source study can be sourced [HERE](#), and it has been translated into English by Claire Edwards ([on SOTN](#)).
- The study, I believe, is hugely significant in that it demonstrates clearly the most likely probability that the COVID-19 hypoxic injuries and hospital admissions are directly related to electromagnetic radiation exposure by 5G Networks. Governments across the world can argue ‘till the cows come home that 5G is safe and that there is no correlation to the coronavirus outbreaks — but the revelation of this data seems irrefutable.



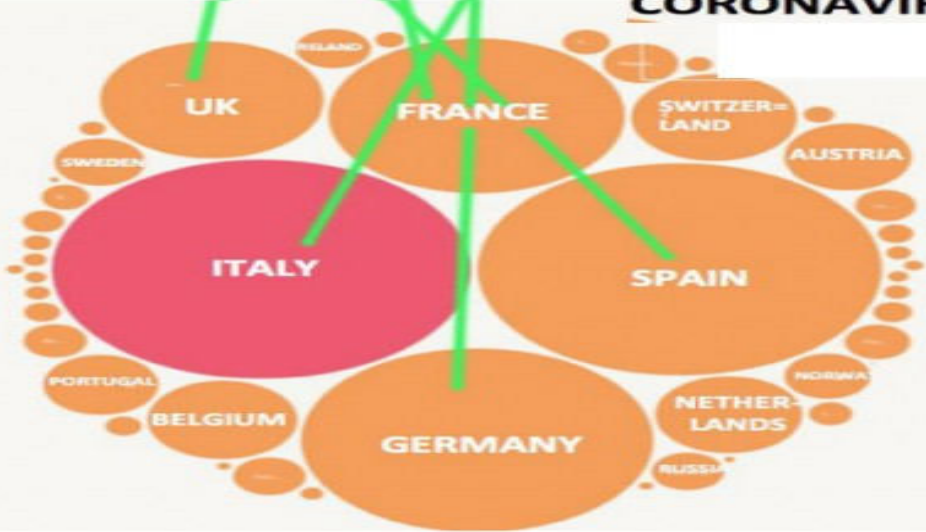


	Band	IRE	Award
	• 3.4 - 3.8 GHz (350 Mhz)		2017
	• 26 GHz		2018
	Band	FRA	Award
	• 3.46 - 3.8 GHz		2018
	• 26 GHz		2019
	Band	SPA	Award
	• 3.4-3.8 GHz		2019/2020
	• 26.5 - 27.5 GHz		2019/2020
	Band	IT	Award
	• 3.6 - 3.8 GHz		2018
	• 26.5 - 27.5 GHz		2018
	Band	GER	Award
	• 3.4 - 3.8 GHz		2018
	• 26.5 - 27.5 GHz		2018?
	Band		Award
	• 3.4 - 3.8 GHz		2018
	• 26.5 - 27.5 GHz		2020
			Award
	• 3.4-3.8 GHz		2019/20*
	• 26 GHz		2020+*

	Band	UK	Award
	• 3.4 - 3.6 GHz (150 MHz)		2018
	• 3.6 - 3.8 GHz (116 MHz)		2019
	• 26.5 - 27.5 GHz		2018/2019



INCIDENCE OF CORONAVIRUS



San Marino: Comparison of Rates of Infection with Italy and Croatia. San Marino was the first European state to get 5G technology – and has the highest rate of infection. San Marino is 2.59 times more than Italy and 27 times more than Croatia – a country that does not have 5G.

Comparison of no. of infections per 1000 inhabitants in 4 countries near the same latitude and using 5G networks



5G NETWORK:

The average for Spain and Italy is 2.4.

The average for Portugal and Greece is 1.09.

Conclusion: the two countries with 5G have 220% more infections.

Note: data for 4 April 2020

- The nine countries with the most infections worldwide all receive 5G radiation from satellites.
- Comparing four nearby countries of the same latitude: Portugal, Spain, Italy, Greece. The two countries with 5G (Spain and Italy) have 220% more infections than Portugal and Greece.
- The comparison between the small State of San Marino (Italy) and Croatia (just across the Adriatic Sea) is astonishing. San Marino was the first European state to get 5G technology, and has the highest rate of infection. San Marino is 2.59 times more than Italy and 27 times more than Croatia — a country that does not have 5G.
- The five hot cities in Italy align with the 5G rollouts, as does Spain. Even the hot spots in Barcelona and Madrid align with 5G coverage. Another very interesting comparison is between Mexico and the US. Rates in the 5G-US are 2.7 per 1000 inhabitants, whereas Mexico (no 5G) is 0.04/1000.
- Another astonishing observation is Africa — a continent almost devoid of infections, except for South Africa. Well Bartomeu claims that only South Africa has 5G. As a further observation from me, most of the Australian cases were from those off the 5G-cruise ships and coming off international flights. Were they flying close to 5G satellites?

Makar, V. R., et al. "Effect of millimeter waves on natural killer cell activation." *Bioelectromagnetics: Journal of the Bioelectromagnetics Society, The Society for Physical Regulation in Biology and Medicine, The European Bioelectromagnetics Association* 26.1 (2005): 10-19.

Abstract

Millimeter wave therapy (MMWT) is being widely used for the treatment of many diseases in Russia and other East European countries. MMWT has been reported to reduce the toxic effects of chemotherapy on the immune system. The present study was undertaken to investigate whether millimeter waves (MMWs) can modulate the effect of cyclophosphamide (CPA), an anticancer drug, on natural killer (NK) cell activity. NK cells play an important role in the antitumor response. MMWs were produced with a Russian-made YAV-1 generator. The device produced modulated 42.2 ± 0.2 GHz radiation through a 10×20 mm rectangular output horn. Mice, restrained in plastic tubes, were irradiated on the nasal area. Peak SAR at the skin surface and peak incident power density were measured as 622 ± 100 W/kg and 31 ± 5 mW/cm², respectively. The maximum temperature elevation, measured at the end of 30 min, was 1 °C. The animals, restrained in plastic tubes, were irradiated on the nasal area. CPA injection (100 mg/kg) was given intraperitoneally on the second day of 3-days exposure to MMWs. All the irradiation procedures were performed in a blinded manner. NK cell activation and cytotoxicity were measured after 2, 5, and 7 days following CPA injection. Flow cytometry of NK cells showed that CPA treatment caused a marked enhancement in NK cell activation. The level of CD69 expression, which represents a functional triggering molecule on activated NK cells, was increased in the CPA group at all the time points tested as compared to untreated mice. However, the most enhancement in CD69 expression was observed on day 7. A significant increase in TNF- α level was also observed on day 7 following CPA administration. On the other hand, CPA caused a suppression of the cytolytic activity of NK cells. MMW irradiation of the CPA treated groups resulted in further enhancement of CD69 expression on NK cells, as well as in production of TNF- α . Furthermore, MMW irradiation restored CPA induced suppression of the cytolytic activity of NK cells. **Our results show that MMW irradiation at 42.2 GHz can up-regulate NK cell functions.** *Bioelectromagnetics* 26:10–19, 2005. © 2004 Wiley-Liss, Inc.



Alekseev, S. I., O. V. Gordiienko, and M. C. Ziskin. "Reflection and penetration depth of millimeter waves in murine skin." *Bioelectromagnetics: Journal of the Bioelectromagnetics Society, The Society for Physical Regulation in Biology and Medicine, The European Bioelectromagnetics Association* 29.5 (2008): 340-344.

Abstract:

Millimeter (mm) wave reflectivity was used to determine murine skin permittivity. Reflection was measured in anesthetized Swiss Webster and SKH1-hairless mice in the 37–74 GHz frequency range. Two skin models were tested. Model 1 was a single homogeneous skin layer. Model 2 included four skin layers: (1) the stratum corneum, (2) the viable epidermis plus dermis, (3) fat layer, and (4) muscle which had infinite thickness. We accepted that the permittivity of skin in the mm wave frequency range results from the permittivity of cutaneous free water which is described by the Debye equation. Using Fresnel equations for reflection we determined the skin parameters best fitting to the reflection data and derived the permittivity of skin layers. The permittivity data were further used to calculate the power density and specific absorption rate profiles, and the penetration depth of mm waves in the skin. In both murine models, mm waves penetrate deep enough into tissue to reach muscle. **In human skin, mm waves are mostly absorbed within the skin.** Therefore, when extrapolating the effects of mm waves found in animals to humans, it is important to take into account the possible involvement of muscle in animal effects. *Bioelectromagnetics* 29:340–344, 2008. © 2008



Pakhomov, Andrei G., et al. "Current state and implications of research on biological effects of millimeter waves: a review of the literature." *Bioelectromagnetics: Journal of the Bioelectromagnetics Society, The Society for Physical Regulation in Biology and Medicine, The European Bioelectromagnetics Association* 19.7 (1998): 393-413.

Abstract: In recent years, research into biological and medical effects of millimeter waves (MMW) has expanded greatly. This paper analyzes general trends in the area and briefly reviews the most significant publications, proceeding from cell-free systems, dosimetry, and spectroscopy issues through cultured cells and isolated organs to animals and humans. The studies reviewed demonstrate effects of low-intensity MMW (10 mW/cm² and less) on cell growth and proliferation, activity of enzymes, state of cell genetic apparatus, function of excitable membranes, peripheral receptors, and other biological systems. **In animals and humans, local MMW exposure stimulated tissue repair and regeneration, alleviated stress reactions, and facilitated recovery in a wide range of diseases** (MMW therapy). Many reported MMW effects could not be readily explained by temperature changes during irradiation. The paper outlines some problems and uncertainties in the MMW research area, identifies tasks for future studies, and discusses possible implications for development of exposure safety criteria and guidelines.



Zhadobov, Maxim, et al. "Millimeter-wave interactions with the human body: State of knowledge and recent advances." *International Journal of Microwave and Wireless Technologies* 3.2 (2011): 237-247.

The biocompatibility of millimeter-wave devices and systems is an important issue due to the wide number of emerging body-centric wireless applications at millimeter waves. This review article provides the state of knowledge in this field and mainly focuses on recent results and advances related to the different aspects of millimeter-wave interactions with the human body. Electromagnetic, thermal, and biological aspects are considered and analyzed for exposures in the 30-100 GHz range with a particular **emphasis on the 60-GHz band**

CONCLUSION

This paper summarizes the most significant recent results and advances in the field of interaction of millimeter waves with the human body. EM, thermal, and biological aspects are reviewed with a particular emphasis on 60-GHz exposures. The recently introduced dosimetric techniques and instrumentation for bioelectromagnetic laboratory studies are presented. First, available data on the dielectric properties of skin at 60 GHz is summarized demonstrating that well-established permittivity database is missing for the millimeter-wave band. It is shown that **26–41% of power is reflected at the air/skin interface** for the normal incidence, and this value deviates significantly for illuminations under oblique incidence. **More than 90% of the transmitted power is absorbed by the skin**, and therefore single- or multi-layer skin model is sufficient for the reliable EM dosimetry. Clothing in direct contact with the skin enhances the power transmission, whereas an air gap of 0–2 mm between the clothes and skin decreases the transmission.



Department of Neuroscience, Karolinska Institute,

Abstract

Purpose: To investigate the mortality in nervous system-related diseases in different parts of Sweden to see if it may have any correlation to mobile phone output power. **Methods:** The average output power from mobile phones was calculated based on power measurements and information on mobile system coverage over the country. Mortality data was obtained from the National Board of Health and Welfare in Sweden. **Results:** The main contribution to the increased mortality in nervous system-related diseases was deaths due to increasing mortality in Alzheimer's disease (AD). The correlation between mobile phone average output power and mortality has increased the last few years and is today significant.

Conclusions: **The mortality in Alzheimer's disease appears to be associated with mobile phone output power. The mortality is increasing fast and is expected to increase substantially within the next 10 years.** Deeper studies in this complex area are necessary.

From the Text: A closer analysis of different diseases within the group "nervous system diseases" revealed that **AD was the main contributor to the strong increase of deaths** during the years since the late 1980's.

“Alzheimer mortality - why does it increase so fast in sparsely populated areas?”

European Biology and Bioelectromagnetics.

2005; 1: 225-246.

Hallberg Ö, Johansson O.



Direct damage to over 100K metabolic enzymes, channels and mitochondria (engines) inside our cells. Solution: shielding, anti-oxidants, peptide therapy (cholostrum etc.), melatonin

“Brain proteome response following whole body exposure of mice to mobile phone or wireless DECT base radiation”

Electromagnetic Biology and Medicine; Posted online on January 20, 2012.

(doi:10.3109/15368378.2011.631068 (1–25) Adamantia F. Fragopoulou, Athina Samara, Marianna H. Antonelou, Anta Xanthopoulou, Aggeliki Papadopoulou, Konstantinos Vougas, Eugenia Koutsogiannopoulou, Ema Anastasiadou, Dimitrios J. Stravopodis, George Th. Tsangaris, Lukas H. Margaritis Department of Cell Biology and Biophysics, Athens University

Abstract:

The objective of this study was to investigate the effects of two sources of electromagnetic fields (EMFs) on the proteome of cerebellum, hippocampus, and frontal lobe in Balb/c mice following long-term whole body irradiation. Three equally divided groups of animals (6 animals/group) were used; the **first** group was exposed to a **typical mobile phone**, at a SAR level range of 0.17–0.37 W/kg for 3 h daily for 8 months, the **second** group was exposed to a **wireless DECT base** (Digital Enhanced Cordless Telecommunications/Telephone) at a SAR level range of 0.012–0.028 W/kg for 8 h/day also for 8 months and the **third** group comprised the **sham**-exposed animals. Comparative proteomics analysis revealed that long-term irradiation from **both EMF sources** altered significantly ($p < 0.05$) the **expression of 143 proteins** in total (as low as 0.003 fold downregulation **up to 114 fold overexpression**). Several neural function related proteins (i.e., Glial Fibrillary Acidic Protein (GFAP), Alpha synuclein, Glia Maturation Factor beta (GMF), and apolipoprotein E (apoE)), heat shock proteins, and cytoskeletal proteins (i.e., Neurofilaments and tropomodulin) are included in this list as well as proteins of the brain metabolism (i.e., Aspartate aminotransferase, Glutamate dehydrogenase) to nearly all brain regions studied. Western blot analysis on selected proteins confirmed the proteomics data. The observed **protein expression changes may be related to brain plasticity** alterations, indicative of **oxidative stress in the nervous system** or involved in **apoptosis** and might potentially explain human health hazards reported so far, such as **headaches, sleep disturbance, fatigue, memory deficits, and brain tumor long-term induction** under similar exposure conditions.



Electromagnetic Radiation and the ability to detoxify metals and environmental toxicants

Yurekli, Ali Ihsan, et al. "GSM base station electromagnetic radiation and oxidative stress in rats." *Electromagnetic Biology and Medicine* 25.3 (2006): 177-188.

Abstract: The ever increasing use of cellular phones and the increasing number of associated base stations are becoming a widespread source of nonionizing electromagnetic radiation. Some biological effects are likely to occur even at low-level EM fields. In this study, a gigahertz transverse electromagnetic (GTEM) cell was used as an exposure environment for plane wave conditions of far-field free space EM field propagation at the GSM base transceiver station (BTS) frequency of 945 MHz, and effects on oxidative stress in rats were investigated. When EM fields at a power density of 3.67 W/m^2 (specific absorption rate = 11.3 mW/kg), which is well below current exposure limits, were applied, MDA (malondialdehyde) level was found to increase and GSH (**reduced glutathione**) concentration was found to **decrease significantly** ($p < 0.0001$). Additionally, there was a less significant ($p = 0.0190$) increase in SOD (superoxide dismutase) activity under EM exposure.

Burlaka, Anatoly, et al. "**Changes in mitochondrial functioning with electromagnetic radiation** of ultra high frequency as revealed by electron paramagnetic resonance methods." *International journal of radiation biology* 90.5 (2014): 357-362.

RESULTS: The qualitative and quantitative disturbances in electron transport chain (ETC) of mitochondria are registered. A formation of the iron-nitrosyl complexes of nitric oxide (NO) radicals with the iron-sulphide (FeS) proteins, the decreased activity of FeS-protein N2 of NADH-ubiquinone oxidoreductase complex and flavo-ubisemiquinone growth combined with the increased rates of superoxide production are obtained.



Other negative effects on our memory

Hao, Dongmei, et al. "Effects of long-term electromagnetic field exposure on spatial learning and memory in rats." *Neurological Sciences* 34.2 (2013): 157-164.

The Scientist

Jared Cooney Horvath; *May 1, 2020*

It seems as though the more we embrace external technologies, the more our memory faculties deteriorate. But the truth might just be scarier.

To understand what's going on, we must first become acquainted with the structure of memory. In its simplest form, memory can be understood as a three-step process: first we encode information in the brain; then we store that information in the brain; and finally, we retrieve that information from the brain. From each of these steps, we can learn something interesting about memory in the modern world.

Unfortunately, when information exposure is constant and ceaseless, our ability to hold onto information naturally diminishes.

In a highly cited [study](#) from 2011, researchers found that individuals remember significantly fewer facts when they're told that those facts will be externally stored and easily accessible in the future. Termed the "Google Effect," this is the reason why we so often don't remember phone numbers, email addresses, or meeting schedules—technology has allowed us to outsource memory storage



Melatonin

- Melatonin is the ultimate protection against **Electromagnetic radiation** (3G and 5G): Reiter, Russel J., et al. "Melatonin as a radioprotective agent: a review." *International Journal of Radiation Oncology* Biology* Physics* 59.3 (2004): 639-653.
- The ultimate repair agent for **mitochondrial damage** - that's all of us! (Andrabi, Shaida A., et al. "Direct inhibition of the mitochondrial permeability transition pore: a possible mechanism responsible for anti-apoptotic effects of melatonin." *The FASEB journal* 18.7 (2004): 869-871)

Treatment:

1. Increase your own melatonin production:

- a. **Detox** the pineal (fluoride, aluminum, glyphosate) and protect it from EMR
- b. Yoga: Harinath, Kasiganesan, et al. "Effects of **Hatha yoga** and Omkar meditation on cardiorespiratory performance, psychologic profile, and melatonin secretion." *The Journal of Alternative & Complementary Medicine* 10.2 (2004): 261-268.

2. Use **propolis tincture (BioPure.eu): 2-3 dropperful 3 times per day (CAPE):**

"A novel antioxidant agent caffeic acid phenethyl ester (from **Propolis**) prevents long-term mobile phone exposure-induced renal impairment in rat." *Molecular and cellular biochemistry* 277, no. 1 (2005): 73-80; Ozguner, Fehmi, F. Oktem, A. Ayata, A. Koyu, and H. Ramazan Yilmaz.

3. Substitution

Transdermal Melatonin: Vitahealth Apothecary in New York, tel: 001-212 6281110.

- Adult dosing: initially 500 mg or more. Permanent protective dose: 125-250 mg (can also be used as suppository)
- Children: initial dosing 250 mg. Permanent dose: 80 mg.
- For the first 3-6 months strong detox reactions are to be expected and should be dealt with – with the help of a practitioner



Solution: anti-oxidants, anti-inflammatory diet and nutrients, melatonin to protect DNA

[NeuroToxicology](#)

[Volume 51](#), December 2015, Pages 158–165

Low intensity microwave radiation induced oxidative stress, inflammatory response and DNA damage in rat brain

[Kanu Megha](#) et al.

Abstract

Over the past decade people have been constantly exposed to microwave radiation mainly from wireless communication devices used in day to day life. Therefore, the concerns over potential adverse effects of microwave radiation on human health are increasing. Until now no study has been proposed to investigate the underlying causes of genotoxic effects induced by low intensity microwave exposure. Thus, the present study was undertaken to determine the influence of low intensity microwave radiation on oxidative stress, inflammatory response and DNA damage in rat brain. The study was carried out on 24 male Fischer 344 rats, randomly divided into four groups ($n = 6$ in each group): group I consisted of sham exposed (control) rats, group II–IV consisted of rats exposed to microwave radiation at frequencies 900, 1800 and 2450 MHz, specific absorption rates (SARs) 0.59, 0.58 and 0.66 mW/kg, respectively in gigahertz transverse electromagnetic (GTEM) cell for 60 days (2 h/day, 5 days/week). Rats were sacrificed and decapitated to isolate hippocampus at the end of the exposure duration.

Low intensity microwave exposure resulted in a frequency dependent significant increase in oxidative stress markers *viz.* malondialdehyde (MDA), protein carbonyl (PCO) and catalase (CAT) in microwave exposed groups in comparison to sham exposed group ($p < 0.05$). Whereas, levels of reduced glutathione (GSH) and superoxide dismutase (SOD) were found significantly decreased in microwave exposed groups ($p < 0.05$). A significant increase in levels of pro-inflammatory cytokines (IL-2, IL-6, TNF- α , and IFN- γ) was observed in microwave exposed animal ($p < 0.05$). Furthermore, significant DNA damage was also observed in microwave exposed groups as compared to their corresponding values in sham exposed group ($p < 0.05$).

In conclusion, the present study suggests that **low intensity microwave radiation induces oxidative stress, inflammatory response and DNA damage in brain** by exerting a frequency dependent effect. The study also indicates that increased oxidative stress and inflammatory response might be the factors involved in DNA damage following low intensity microwave exposure.



Most radioprotective and effective natural anti-oxidants

www.BioPure.eu:

- frequency enhanced extracts from rosemary, propolis and ginkgo Liquorice tincture (*E-Schutz mit Rosmarin, Propolis, Koriander+Phospholipiden; IQU mit Rosmarin, Ginko, AluLu + Phospholipiden; Lakritze Tinktur*)
- Broccoli sprout powder (*Brokkolisprossen*)
- RoseHip powder: 1 tsp twice daily
- Deep Purple: Pomegranate, Acai, Plum: 1 tsp twice daily (vascular health)
- Baikalin powder: 1 tsp twice daily (*Retrobai Kps.*)
- E-shield skin lotion (www.KiScience.com)
- NAC: 500 mg twice daily.

Ozgur, E., G. Guler, and N. Seyhan. 2010. "Mobile phone radiation-induced free radical damage in the liver is inhibited by the antioxidants **N-acetyl cysteine** and epigallocatechin-gallate." *Int J Radiat Biol* 86 (11):9

23 Studies show that EMR affects the voltage gated calcium channels and causes release of peroxynitrite

Pall, M. L. (2013). Electromagnetic fields act via activation of voltage-gated calcium channels to produce beneficial or adverse effects. *Journal of cellular and molecular medicine*, 17(8), 958-965.

From the abstract:

The direct targets of extremely low and microwave frequency range electromagnetic fields (EMFs) in producing non-thermal effects have not been clearly established. **Pathophysiological responses to EMFs may be as a result of nitric oxide-peroxynitrite-oxidative stress pathway** of action. A single such well-documented example, EMF induction of DNA single-strand breaks in cells, as measured by alkaline comet assays, is reviewed here. This article reviews, then, a substantially supported set of targets, VGCCs, whose stimulation produces non-thermal EMF responses by humans/higher animals with downstream effects involving **Ca²⁺/calmodulin-dependent nitric oxide increases, which may explain therapeutic and pathophysiological effects.**

Both extremely low frequency fields, including 50/60 cycle exposures, and microwave EMF range exposures act *via* activation of VGCCs. So do static electric fields, static magnetic fields and nanosecond pulses. Voltage-gated calcium channel stimulation leads to increased intracellular Ca²⁺, which can act in turn to stimulate the two calcium/calmodulin-dependent nitric oxide synthases and increase nitric oxide. It is suggested here that nitric oxide may act in therapeutic/potentially therapeutic EMF responses *via* its main physiological pathway, stimulating cGMP and protein kinase G. It is also suggested that **nitric oxide may act in pathophysiological responses to EMF exposure, by acting as a precursor of peroxynitrite, producing both oxidative stress and free radical breakdown products.**

Sage, C., Johansson, O., & Sage, S. A. (2007). Personal digital assistant (PDA) cell phone units produce elevated extremely-low frequency electromagnetic field emissions. *Bioelectromagnetics*, 28(5), 386-392.



Peroxynitrite has been implied as causative in ALS, Parkinson, Alzheimer, MS and many other neurological conditions

Hooper, D. C., Bagasra, O., Marini, J. C., Zborek, A., Ohnishi, S. T., Kean, R., ... & Akaike, T. (1997). Prevention of experimental **allergic encephalomyelitis** by targeting nitric oxide and peroxynitrite: implications for the treatment of **multiple sclerosis**. *Proceedings of the National Academy of Sciences*, 94(6), 2528-2533.

Beckman, Joseph S., et al. "**ALS**, SOD and peroxynitrite." *Nature* 364.6438 (1993): 584-584.

Ebadi, Manuchair, and Sushil K. Sharma. "Peroxynitrite and mitochondrial dysfunction in the pathogenesis of **Parkinson's disease**." *Antioxidants and Redox Signaling* 5.3 (2003): 319-335.

Pall, Martin L. "Elevated peroxynitrite as the cause of **chronic fatigue syndrome**: Other inducers and mechanisms of symptom generation." *Journal of Chronic Fatigue Syndrome* 7.4 (2000): 45-58.

Smith, Mark A., et al. "Widespread peroxynitrite-mediated damage in **Alzheimer's disease**." *Journal of Neuroscience* 17.8 (1997): 2653-2657.

Szabó, Csaba. "The pathophysiological role of peroxynitrite in shock, **inflammation**, and ischemia-reperfusion injury." *Shock*, 6 (2); 1996: 79-88.

Szabó, C. (1996). **DNA strand breakage** and activation of poly-ADP ribosyltransferase: a cytotoxic pathway triggered by peroxynitrite. *Free Radical Biology and Medicine*, 21(6), 855-869.



How to lower peroxynitrite?

- Melatonin is – in higher doses - the **strongest antioxidant and peroxynitrite scavenger** in our system (Reiter, Russel J., et al. "Biochemical reactivity of melatonin with reactive oxygen and nitrogen species." *Cell biochemistry and biophysics* 34.2 (2001): 237-256.)
- In neurological conditions or cancer we prefer to use high dose melatonin in the form of suppositories. This includes our clients with EHS
- Zeolite:
Mainah, H. S., & Adriani, L. (2011). Change of blood ammonia level and efficiency of nitrogen utilization in Priangan lambs due to **klinoptilolit** addition in ration. *Lucrari stiintifice. Seria Zootehnie-Universitatea de Stiinte Agricole si Medicina Veterinara Ion Ionescu de la Brad (Romania)*.

Treatment: Zeolite – ½ tsp 3 times/day away from food

- Hooper, D. C., Scott, G. S., Zborek, A., Mikheeva, T., Kean, R. B., Koprowski, H., & Spitsin, S. V. (2000). **Uric acid, a peroxynitrite scavenger**, inhibits CNS inflammation, blood–CNS barrier permeability changes, and tissue damage in a mouse model of multiple sclerosis. *The FASEB Journal*, 14(5), 691-698.



Extremely-Low
Frequency (ELF)
and
Radiofrequency
(RF)
Electromagnetic
Fields Have Very
Similar Biological
Effects

- **Genetic Effects**
- **Cancer**
- **Cellular/Molecular Effects**
- **Electrophysiology**
- **Behavior**
- **Nervous System**
- **Blood-brain barrier**
- **Calcium**
- **Cardiovascular**
- **Warm sensation**
- **Hormones**
- **Immunology**
- **Metabolic rate/effects**
- **Reproduction/growth**
- **Subjective symptoms**
- **Stress**

Source: Dr. Henry Lai, Research Professor, Department of Bioengineering, University of Washington. Presentation March 21, 2008 at Council on Wireless Technology Impacts EMF Panel, San Francisco, CA.



It was known 1973, that 2.4 GigaHerz is the wavelength that destroys our ability to fight off infections. This wavelength was later selected to blanket the entire western world. Why? Who? Lyme, chronic fatigue from EBV, mould illness are symptoms of EMR exposure!

- Szmigielski, S., J. Jeljaszewicz, and Marzenna Wiranowska. "Acute staphylococcal infections in rabbits irradiated with 3-GHz microwaves." *Annals of the New York Academy of Sciences* 247, no. 1 (1975): 305-311. From the abstract: "Increased cell-membrane permeability and injury to subcellular granules and depression of phagocytic function with inhibition of intracellular killing of bacteria"
- Mayers, C. P., & Habeshaw, J. A. (1973). Depression of phagocytosis: A non-thermal effect of microwave radiation as a potential hazard to health. *International Journal of Radiation Biology and Related Studies in Physics, Chemistry and Medicine*, 24(5), 449-461.
- Johansson, O. (2009). Disturbance of the immune system by electromagnetic fields—A potentially underlying cause for cellular damage and tissue repair reduction which could lead to disease and impairment. *Pathophysiology*, 16(2), 157-1
- Panagopoulos, D. J., Johansson, O., & Carlo, G. L. (2015). Real versus simulated mobile phone exposures in experimental studies. *BioMed research international*, 2015. From the abstract: "Living organisms seem to have decreased defense against environmental stressors "
- Shandala, M.G., Dumanskiĭ, U.D., Rudnev, M.I., Ershova, L.K. and Los, I.P., 1979. Study of nonionizing microwave radiation effects upon the central nervous system and behavior reactions. *Environmental Health Perspectives*, 30, p.115. From the abstract: The biologic effect of an electromagnetic field of a frequency of 2375 (2.4 GHz) was studied. ... causes a number of changes in bioelectric brain activity and also in behavioral immunological, and cytochemical reactions. ... inhibition of cellular and humoral immunity were also observed.



Aterini, Stefano, and Marco Ruggiero. "Electromagnetic Fields." *Encyclopedia of Cancer*. Springer Berlin Heidelberg, 2011. 1213-1216.

- “However, since we have learned that **electromagnetic fields, even of minimal intensity such as the endogenous electromagnetic fields, modify the human microbiome**, their effects might be much more complex and far ranging
- Considering that the human microbiome is involved in the development and function of all other organs and systems, and most notably the **immune system** (Palm *et al.* 2015), **alteration of the microbiome may be one of the mechanisms through which electromagnetic fields, both endogenous and exogenous, exert their biological effects.**
- Thus, the effects of electromagnetic fields on the human microbiome open a new perspective in assessing the risks for health and in preventing them.
- Microbes and the microbiome may amplify or mitigate carcinogenesis, responsiveness to cancer therapeutics, and cancer-associated complication (Garrett 2015) and, therefore, **electromagnetic fields modifying the microbiome may interfere with all such cancer-related responses.**
- It is foreseeable that the development of functional foods containing probiotics for the prevention and treatment of cancer will have to take into account the **effects of endogenous as well as exogenous electromagnetic fields on the human microbiome”**.



If we have a chronic endotoxin-producing infection such as Lyme, or exposure to mould in our home, or chronic EBV – WiFi and the use of the cellphone massively potentiates the virulence of the problem and opens the blood-brain barrier (so our CNS turns to mush)

Riddle, Marie M., Ralph J. Smialowicz, and Ronald R. Rogers. "**Microwave radiation (2450-MHz) potentiates the lethal effect of endotoxin in mice.**" Health physics 42.3 (1982): 335-340.

Abstract: Groups of male CBA/J mice were injected with Salmonella typhimurium lipopolysaccharide (LPS) and irradiated with 2450 MHz (CW) microwaves. The 50% lethal dose (LD50) of LPS was determined for mice irradiated at 30, 20, 10 and 5 mW/cm² immediately following injection. The average specific absorption rate was approximately 0.6 W/kg per 1 mW/cm² incident power. An equal number of animals served as sham-irradiated controls for each power density. The mice were placed individually in small containers and were maintained at 22 degrees C and 50% relative humidity during a 2 hour irradiation period. Following irradiation the mice were returned to their home cages and were observed for 48 hr. A significant decrease in the LPS dose required to kill 50% of the mice was observed at power densities of 20 and 30 mW/cm². High ambient temperature (37 degrees C) also potentiated the lethal effect of endotoxin. Microwave irradiation prior to LPS injection, however, did not affect the lethal action of LPS.

Nittby, H., G. Grafstrom, J. L. Eberhardt, L. Malmgren, A. Brun, B. R. Persson, and L. G. Salford. 2008. Radiofrequency and extremely low-frequency electromagnetic field effects on the **blood-brain barrier**. Electromagn Biol Med 27 (2):103-26: From the abstract: "**There is evidence that exposure to electromagnetic fields at non-thermal levels disrupts this barrier**"



Electromagnetic fields suppress immunity and provoke the growth and pathogenicity of Borrelia and EBV

Marsch, W., A. Mayet, and M. Wolter. "Cutaneous fibroses induced by Borrelia burgdorferi." *British Journal of Dermatology* 128.6 (1993): 674-678.

*Summary: Three cases of chronic infection with Borrelia burgdorferi are described. The patients presented with nodular or discoid fibrosis, partly in conjunction with acrodermatitis chronica atrophicans (ACA). Juxta-articular fibrotic nodules may develop within a few months of the onset of ACA. Nodular, discoid morphea-like, and widespread cutaneous fibroses in **chronic Borrelia infection may be provoked by** trauma, surgery or **electromagnetic radiation**. They respond well to antibiotic therapy. These lesions offer an in vivo model for studying the evolution of immunologically induced fibrosis.*

Doyon, P. R., & Johansson, O. (2017). **Electromagnetic fields** may act via calcineurin inhibition to **suppress immunity**, thereby **increasing risk for opportunistic infection**: Conceivable mechanisms of action. *Medical Hypotheses*, 106, 71-87.

Liu, Y., Wang, M. L., Zhong, R. G., Ma, X. M., Wang, Q., & Zeng, Y. (2013). The **induction of Epstein-Barr Virus early antigen** expression in Raji cells by GSM mobile phone radiation. *Biomed Environ Sci*, 26(1), 76-8.

*Abstract conclusions: "The results indicate that **mobile phone radiation could induce the expression of EBV-EA** and the induction is even more evident with the presence of tumor promoter such as TPA"*



A 7-minute phonecall can lastingly activate your hidden EBV

The Induction of Epstein-Barr Virus Early Antigen Expression in Raji Cells by GSM Mobile Phone Radiation*

LIU Yang¹, WANG Ming Lian^{1,#}, ZHONG Ru Gang¹, MA Xue Mei¹, WANG Qun², and ZENG Yi¹

Biomed Environ Sci, 2013; 26(1):76-78

Mobile phones are widely used nowadays and there have been many reports suspecting mobile phone radiation-induced cancer during the past few years^[1-5].

Raji Cell line carries the latent Epstein-Barr Virus (EBV) genome and expresses the Epstein-Barr virus nuclear antigen (EBNA). Raji is sometimes referred to as an EBV "non-producer" since the integrated EBV genome carries deletions attributed to preventing the formation of virus particles. A variety of antigens, such as the Epstein-Barr virus early antigen (EBV-EA), can be expressed when Raji cells are stimulated by chemical or physical carcinogens^[10]. Clinical studies have shown that EBV-EA is linked to malignancies including Burkitt's lymphoma, T-cell lymphoma, gastric cancer, nasopharyngeal cancer and some breast cancer^[11]. EBV-EA gene has been identified as a cancer-related gene^[12], so we observe the effect of mobile phone radiation on the expression of EBV-EA gene to investigate the relationship between mobile phone radiation and cancer genesis.

The results indicate that mobile phone radiation could induce the expression of EBV-EA and the induction is even more evident with the presence of tumor promoter such as TPA.



Bradbury, Jane. "Liquorice compound beats latent herpesvirus."
The Lancet Infectious Diseases 5.4 (2005): 201.

Researchers at the New York University School of Medicine (NY, USA) may have found a way to treat latent Kaposi's sarcoma-associated herpesvirus (KSHV, also known as HHV8) infections. Ornella Flore and colleagues report that glycyrrhizic acid (GA)—a compound isolated from **liquorice that inhibits the lytic replication of other herpesviruses**—terminates KSHV latent infection of B lymphocytes (*J Clin Invest* 2005; **115**: 642–52). **“This is the first time we have found anything that targets latent gene expression in herpesvirus-infected cells”**, says Flore, “but it is too soon to say whether GA will be effective against other latent herpesviruses or suitable for clinical use against KSHV”.

The treatment of infections caused by herpesvirus is complicated by their ability to establish latent infections. Herpesviruses can hide within their host cells, making only the few proteins needed to maintain latency, and emerges at a later date to cause overt disease. No currently available drugs directly attack latent herpesviruses, although latent Epstein–Barr virus can be reactivated, thus allowing treatment with standard antiviral drugs.

Anagha, K., Manasi, D., Priya, L., & Meera, M. (2014). Scope of Glycyrrhiza glabra (Yashtimadhu) as an Antiviral agent: A Review. *Int. J. Curr. Microbiol. App. Sci*, 3(12), 657-665.

The persistence of drug resistant viruses has become a major problem. Antiviral therapy has targeted various aspects of viral replication steps. Nowadays pharmaceutical industries are focusing to develop new antiviral agents for the treatment of the multidrug resistant viral infections. There is a large amount of data published stating the efficacy of various medicinal plants useful against many viruses. Yashtimadhu (Glycyrrhiza glabra) is one such plant which has shown remarkable activity against large number of viruses. In ancient Ayurvedic System, more than 1250 preparations are described containing Yashtimadhu as one of its constituents. Glycyrrhiza glabra or **Liquorice has been proven beneficial against many DNA viruses such as Varicella zoster virus, Kaposi sarcoma-associated herpesvirus, Herpes Simplex Virus-1, Epstein Barr virus, Human Cytomegalo virus, etc and RNA viruses such as Influenza A virus (IAV), H5N1 virus, H1N1 virus, Hepatitis C virus, Newcastle disease virus, Rotavirus, SARS-associated coronavirus, Human Immunodeficiency Virus etc.** This review has tried to give an account of antiviral activity of various bioactive molecules of Yashtimadhu (Glycyrrhiza glabra) against various viruses.

[J Neuroinflammation](#). 2011 Aug 4;8(1):90. "Alzheimer's disease - a neurospirochetosis. Analysis of the evidence following Koch's and Hill's criteria. [Miklossy J](#).

Abstract:

It is established that chronic spirochetal infection can cause slowly progressive dementia, brain atrophy and amyloid deposition in late neurosyphilis. Recently it has been suggested that various types of spirochetes, in an analogous way to *Treponema pallidum*, could cause dementia and may be involved in the pathogenesis of Alzheimer's disease (AD). Here, we review all data available in the literature on the detection of spirochetes in AD and critically analyze the association and causal relationship between spirochetes and AD following established criteria of Koch and Hill. The results show a statistically significant association between spirochetes and AD ($P = 1.5 \times 10^{-17}$, OR = 20, 95% CI = 8-60, N = 247). When neutral techniques recognizing all types of spirochetes were used, or the highly prevalent periodontal pathogen *Treponemas* were analyzed, spirochetes were observed in the brain in more than 90% of AD cases. *Borrelia burgdorferi* was detected in the brain in 25.3% of AD cases analyzed and was 13 times more frequent in AD compared to controls. Periodontal pathogen *Treponemas* (*T. pectinovorum*, *T. amylovorum*, *T. lecithinolyticum*, *T. maltophilum*, *T. medium*, *T. socranskii*) and *Borrelia burgdorferi* were detected using species specific PCR and antibodies. Importantly, co-infection with several spirochetes occurs in AD. The pathological and biological hallmarks of AD were reproduced in vitro. The analysis of reviewed data following Koch's and Hill's postulates shows a probable causal relationship between **neurospirochetosis** and AD. Persisting inflammation and amyloid deposition initiated and sustained by chronic spirochetal infection form together with the various hypotheses suggested to play a role in the pathogenesis of AD a comprehensive entity. As suggested by Hill, once the probability of a causal relationship is established prompt action is needed. Support and attention should be given to this field of AD research. **Spirochetal infection occurs years or decades before the manifestation of dementia. As adequate antibiotic and anti-inflammatory therapies are available, as in syphilis, one might prevent and eradicate dementia.**



To stabilize
our system to
EMR we have
to reduce our
pathogen load

- Lyme: *LKC-Cocktail* (4 dropperful twice daily)
- Retroviruses: En-V tincture: 2 dropperful twice daily
- Cistus tea (Mould, EBV, Lyme, biofilm): 4-8 cups per day,
- Covid-19: *NoCoV- Tinktur*: 2 dropperful 3-4 times/day
- Broccoli powder: 1 tsp twice daily



EMR and Toxic Metals

- Metals act as antennae for EMR. Dispersed metals in chronic toxicity make the body absorb more radiation than the body of a healthy person
- Titanium implants are perfect receivers for millimetre waves (5G)
- Metal detox is an absolute must to survive the upcoming times
- Inhaled Aluminum is the key enemy (GeoEngineering)

Treatment #1: minimize the body's antenna function

- A. dentistry. No metals in the mouth: no amalgam, no gold crowns, no root canals (they contain 5-10% mercury), no titanium implants
- B. Aluminium and heavy metal detox



Wireless Radiation in the Etiology and Treatment of Autism: Clinical Observations and Mechanisms

J. Aust. Coll. Nutr. & Env. Med. Vol. 26 No.2 (August 2007) pages 3-7

Tamara J Mariea and George L Carlo

- **Results**

The sentinel subject's history suggested that the **efficiency of heavy metal detoxification was dramatically increased when EMR was eliminated**. For the larger groups, data indicated that heavy metals were cleared in a time and molecular weight-dependent manner after EMR was eliminated from the treatment environment.

- **Conclusions**

The findings suggest a significant **role of EMR in both the etiology of Autism and the efficacy of therapeutic interventions**. The mechanism of EMR impact could be direct by facilitating early clinical onset of symptoms or indirect, including **trapping heavy metals in cells** and both accelerating the onset of symptoms caused by heavy metal toxicity as well as impeding therapeutic clearance. These data also suggest that wireless device EMR is a synergen in the etiology of Autism, acting in conjunction with environmental and genetic factors, and offer a mechanistic explanation for the correlation between concurrent increases in the incidence of Autism and the use of wireless technology.



The constant 24/7 exposure to microwave/cellphone radiation from either WiFi, nearby cellphone tower (less than 2 km) or cordless phone in the home drives the release of toxic mercury vapour from dental amalgam fillings. 80% migrate into the CNS with a half-life of 32 years

J Biomed Phys Eng. 2016 Mar; 6(1): 41–46.

„Increased Release of Mercury from Dental Amalgam Fillings due to Maternal Exposure to Electromagnetic Fields as a Possible Mechanism for the High Rates of Autism in the Offspring: Introducing a Hypothesis“

Gh. Mortazavi; M. Haghani; N. Rastegarian; S. Zarei; and S.M.J. Mortazavi



- Exley, Christopher, and Elizabeth Clarkson. "Aluminium in human brain tissue from donors without neurodegenerative disease: A comparison with Alzheimer's disease, multiple sclerosis and autism." *Scientific Reports* 10.1 (2020): 1-7.
- A burgeoning number of studies are demonstrating aluminium in human brain tissue. While research has both quantified and imaged aluminium in human brain tissue in neurodegenerative and neurodevelopmental disease there are few similar data for brain tissue from non-neurologically impaired donors. We have used microwave assisted acid digestion and transversely heated graphite furnace atomic absorption spectrometry to measure aluminium in twenty brains from donors without recognisable neurodegenerative disease. The aluminium content of 191 tissue samples was invariably low with over 80% of tissues having an aluminium content below 1.0 µg/g dry weight of tissue. The data for these control tissues were compared with data (measured using identical procedures) for sporadic Alzheimer's disease, familial Alzheimer's disease, autism spectrum disorder and multiple sclerosis. Detailed statistical analyses showed that aluminium was significantly increased in each of these disease groups compared to control tissues. We have confirmed previous conclusions that **the aluminium content of brain tissue in Alzheimer's disease, autism spectrum disorder and multiple sclerosis is significantly elevated**. Further research is required to understand the role played by **high levels of aluminium in the aetiology of human neurodegenerative and neurodevelopmental disease**.





5G und Covid-19

***Int. J. Environ. Res. Public Health* 2015, 12, 9375-9390**

J. Marvin Herndon, *Received: 29 June 2015 / Accepted: 5 August 2015 / Published: 11 August 2015*

Abstract: The widespread, intentional and increasingly frequent chemical emplacement in the troposphere has gone unidentified and unremarked in the scientific literature for years. The author presents evidence that toxic coal combustion fly ash is the most likely **aerosolized particulate sprayed by tanker-jets for geoengineering, weather-modification and climate-modification purposes** and describes some of the multifold consequences on public health. Two methods are employed: (1) Comparison of 8 elements analyzed in rainwater, leached from aerosolized particulates, with corresponding elements leached into water from coal fly ash in published laboratory experiments, and (2) Comparison of 14 elements analyzed in dust collected outdoors on a high-efficiency particulate air (HEPA) filter with corresponding elements analyzed in un-leached coal fly ash material. The results show: (1) the assemblage of elements in rainwater and in the corresponding experimental leachate are essentially identical. At a 99% confidence interval, they have identical means (T-test) and identical variances (F-test); and (2) the assemblage of elements in the HEPA dust and in the corresponding average un-leached coal fly ash are likewise essentially identical. **The consequences on public health are profound, including exposure to a variety of toxic heavy metals, radioactive elements, and neurologically-implicated chemically mobile aluminum** released by body moisture *in situ* after inhalation or through transdermal induction.

Metal Detox made simple

We have to combine biophysics with good biochemistry

- Ionic Footbath (www.biopure.eu): 30 min 3 times per week
- Sauna therapy: 5 min sweating daily. IR-light therapy
- Detox powder (KiScience) 1 tsp twice daily
- Koriander: 2 dropperful 3 times a day before meals
- AluLu: 2 dropperful 3 times per day
- CurcuSyn (mercury): 2 caps 2-3 times/day
- Binders: chlorella (15-20 tbl 3 times per day) between meals
- Alternate with Zeolite: ½ tsp 3 times a day away from meals



Autism may be Linked to Electromagnetic Radiation Levels In Mother's Bedroom During Pregnancy

Pilot Study Finds Over 20x Higher Microwave Power Density Levels in Mothers' Sleeping Locations During Pregnancy

Dr. Dietrich Klinghardt, MD, PhD of the Sophia Health Institute in Woodinville, WA recently conducted a pilot study to assess the potential role of electromagnetic frequencies in the dramatic rise in autism and other neurological impairments over the past decade. Various measurements of electromagnetic radiation exposure were assessed in the case of 10 children with neurological impairment, 8 categorized with Autism Spectrum Disorder. Data was obtained for:

- 1) Mothers' Body Voltage in the mothers' sleeping location during pregnancy;**
 - 2) Child's Body Voltage in current sleeping location;**
 - 3) Microwave Power Density in mothers' sleeping location during pregnancy (microwatt/square meter); and**
 - 4) Child's Microwave Exposure in current sleeping location.**
- Data for mothers with neurologically impaired children were contrasted with similar data for 5 healthy children and their mothers.



The results were as follows:

Body Voltage Levels:

Median Body Voltage Level in Mom's Bed During Pregnancy*

	Value	Range
Neurologically Impaired Children	1,872 millivolts	(380-6,040)
Healthy Group	224 millivolts	(12-480)

8.4x Higher body voltage levels in moms with neurologically impaired children

**Note research shows whatever the Body Voltage of the Mom, it is even higher in the fetus.*

Body Voltage of child in current bed location

	Value	Range
Neurologically Impaired Children	1,028 millivolts	(420-4,900)
Healthy Group	120 millivolts	(0-230)

Conclusion: 8.5x Higher Body Voltage in Neurologically Impaired Child's Sleeping Location



Microwave Exposure:

Microwave Power Density in Sleeping Location

	mw/sq. meter	Range
Neurologically Impaired Children-Mom's Bed Exposure In Pregnancy	290	(110-1,710)
Healthy Group	14	(0-67)

Conclusion: 20.7x higher microwave power density in moms sleeping location in cases where children were neurologically impaired

This pilot data strongly suggests that electromagnetic radiation in the sleeping environment of mothers during pregnancy, as well as electromagnetic radiation in the sleeping environment of children, may be the undiscovered key contributing - if not causative - factor in neurological impairments in children, including autism. Given increasing levels of ambient electromagnetic radiation in modern environments from society's use of electronic equipment, wireless technologies, such as cell phones and wireless networks, high frequency transients on electric lines, and broadband over power lines (BPL), this association needs immediate further exploration



A Possible Association Between Fetal/Neonatal Exposure to Radiofrequency Electromagnetic Radiation and the Increased Incidence of Autism Spectrum Disorders (ASD). Medical Hypotheses, Eden Press, New York.

USA (2004); R.C. Kane

<http://linkinghub.elsevier.com.proxy.healwa.org/retrieve/pii/S0306987703003098?showall=true>

Abstract

Recently disclosed epidemiological data indicate a dramatic increase in the incidence of autism spectrum disorders. Previously, the incidence of autism has been reported as 4-5 per 10000 children. The most recent evidence indicates an increased incidence of about 1 per 500 children. However, the etiology of autism is yet to be determined. The recently disclosed data suggest a possible correlation between autism incidence and a previously unconsidered environmental toxin. It is generally accepted in the scientific community that radiofrequency (RF) radiation is a biologically active substance. It is also readily acknowledged that human exposures to RF radiation have become pervasive during the past 20 years, whereas such exposures were uncommon prior to that time.

It is suggested that fetal or neo-natal exposures to RF radiation may be associated with an increased incidence of autism



Treatment summary

A. Prevention: minimize exposure

- smart use of the stupidphone and computer: the computer switched on WiFi and the phone on your ear is a cellphone tower right in your face. The WiFi router is a cellphone tower, so is the chordless phone
- Switch off all fuses at night
- Use radio-protective clothing (biopure.eu) and sleep sanctuary (www.LittleTreeGroup.com)
- Detoxify metals (aluminium, mercury and lead); foot/handbath with platinum electrode

B: reduce EMR absorption:

- E-Shield body lotion (propolis, rosemary, cilantro, yarrow, cocculus, arnica, selenium, hemp, neem): very effective and healthy. Has helped many many clients with EHS
- Keeping high anti-oxidant status
- Reduce microbial load
- Protective clothing

C. Internal Protection with the informed use of selected items. And forget items you hang around your neck: you cannot counteract physics with metaphysics

Rosemarin, Propolis, Gingko biloba, Koriander, AluLu, NAC, Deep Purple, Rosehip

D. Shielding the home (Building Biology)



Treatment of electrosmog in a "sick" sleeping location: the Faraday canopy



Propolis extract from healthy and happy bees

Propolis contains caffeic acid (CAPE), a melatonin analogue and booster

- Ozguner, Fehmi, et al. "Mobile phone-induced myocardial oxidative stress: protection by a novel antioxidant agent caffeic acid phenethyl ester." *Toxicology and Industrial Health* 21.7-8 (2005): 223-230.
- Takagi, Yasuyuki, et al. "Immune activation and radioprotection by propolis." *The American journal of Chinese medicine* 33.02 (2005): 231-240. El-Ghazaly, M. A., and M. T. Khayyal. "The use of aqueous propolis extract against radiation-induced damage." *Drugs under experimental and clinical research* 21.6 (1995): 229-236.
- Bolouri, Abbas Javadzadeh, et al. "Preventing and therapeutic effect of propolis in radiotherapy induced mucositis of head and neck cancers: a triple-blind, randomized, placebo-controlled trial." *Iranian journal of cancer prevention* 8.5 (2015).
- SPIGOTI, G., et al. "Protective effect of propolis on radiation-induced chromosomal damage on Chinese hamster ovary cells." *Internatonal Nuclear Atlantic Conference*. 2009.
- Montoro, A., et al. "Concentration-dependent protection by ethanol extract of propolis against γ -ray-induced chromosome damage in human blood lymphocytes." *Evidence-based complementary and alternative medicine* 2011 (2010).
- Moreno, M. I. N., Isla, M. I., Sampietro, A. R., & Vattuone, M. A. (2000). Comparison of the free radical-scavenging activity of propolis from several regions of Argentina. *Journal of ethnopharmacology*, 71(1), 109-114.
- Oršolić, Nada, et al. "Assessment by survival analysis of the radioprotective properties of propolis and its polyphenolic compounds." *Biological and Pharmaceutical Bulletin* 30.5 (2007): 946-951.



Organic Rosemary Extract

(www. Biopure.eu)

- Ghoneim, Fatma M., and Eetmad A. Arafat. "Histological and histochemical study of the protective role of [rosemary extract against harmful effect of cell phone electromagnetic radiation](#) on the parotid glands." *Acta histochemica* 118.5 (2016): 478-485.
- Jindal, A., Soyal, D., Sancheti, G., & Goyal, P. K. (2006). Radioprotective potential of [Rosemarinus officinalis against lethal effects of gamma radiation](#): a preliminary study. *Journal of environmental pathology, toxicology and oncology*, 25(4).
- Soyal, Dhanraj, et al. "[Modulation of radiation-induced biochemical alterations](#) in mice by rosemary (Rosemarinus officinalis) extract." *Phytomedicine* 14.10 (2007): 701-705.
- *Recommended dosage of "RayWave", a product containing both biodynamically grown rosemary and propolis from bees (collecting it from a pristine environment):*
2-3 dropperful 3 times/day – for life. Best in either 15-30 ml olive oil or spirit



Melatonin in Autism

Melke, Jonas, et al. "Abnormal melatonin synthesis in autism spectrum disorders." *Molecular Psychiatry* 13.1 (2008): 90-98

Abstract: Melatonin is produced in the dark by the pineal gland and is a key regulator of circadian and seasonal rhythms. **A low melatonin level was reported in individuals with autism spectrum disorders (ASD)**, but the underlying cause of this deficit was unknown. The *ASMT* gene, encoding the last enzyme of melatonin synthesis, is located on the pseudo-autosomal region 1 of the sex chromosomes, deleted in several individuals with ASD. In this study, we sequenced all *ASMT* exons and promoters in individuals with ASD (n=250) and compared the allelic frequencies with controls (n=255). Non-conservative variations of *ASMT* were identified, including a splicing mutation present in two families with ASD, but not in controls. Two polymorphisms located in the promoter (rs4446909 and rs5989681) were more frequent in ASD compared to controls ($P=0.0006$) and were associated with a dramatic decrease in *ASMT* transcripts in blood cell lines ($P=2\times 10^{-10}$). Biochemical analyses performed on blood platelets and/or cultured cells revealed a highly significant decrease in *ASMT* activity ($P=2\times 10^{-12}$) and melatonin level ($P=3\times 10^{-11}$) in individuals with ASD. These results indicate that a low melatonin level, caused by a primary deficit in *ASMT* activity, is a risk factor for ASD. They also support *ASMT* as a susceptibility gene for ASD and highlight the crucial role of melatonin in human cognition and behavior.



Rossignol, D. A., and R. E. Frye. 2011. Melatonin in autism spectrum disorders: a systematic review and meta-analysis. *Dev Med Child Neurol* 53 (9):783-92

From the abstract: *The aim of this study was to investigate melatonin-related findings in autism spectrum disorders (ASD), including autistic disorder, Asperger syndrome, Rett syndrome, and pervasive developmental disorders, not otherwise specified*

*.....an abnormal melatonin circadian rhythm, **below average physiological levels of melatonin** and/or melatonin derivatives, and a positive correlation between these levels and autistic behaviours in four studies*

“Melatonin administration in ASD is associated with improved sleep parameters, better daytime behaviour, and minimal side effects. Additional studies of melatonin would be helpful to confirm and expand on these findings”

Sokolovic, Dusan, et al. "Melatonin reduces oxidative stress induced by chronic exposure of microwave radiation from mobile phones in rat brain." *Journal of radiation research* 49.6 (2008): 579-586.

Melatonin and Breast Cancer

[J Recept Signal Transduct Res](#). 2012 Dec;32(6):290-7. doi: 10.3109/10799893.2012.737002. **Role of melatonin on electromagnetic radiation-induced oxidative stress and Ca²⁺ signaling molecular pathways in breast cancer.** [Naziroğlu M¹](#), [Tokat S](#), [Demirci S](#).

Abstract

AIMS:

Exposure to electromagnetic radiation (EMR) may increase breast cancer risk by inducing oxidative stress and suppressing the production of melatonin. Aim of the present review is to discuss the mechanisms and risk factors of EMR and oxidative stress-induced breast cancer, to summarize the controlled studies evaluating measures for prevention, and to conclude with evidence-based strategies for prevention.

MATERIALS:

Review of the relevant literature and results from our recent basic studies, as well as critical analyses of published systematic reviews were obtained from the Pubmed and the Science Citation Index.

RESULTS:

It has been proposed that chronic exposure to EMR may increase the risk of breast cancer by suppressing the production of melatonin; this suppression may affect the development of breast cancer either by increasing levels of circulation of estrogen or through over production of free oxygen radicals. Most epidemiological studies have also indicated overall effect of EMR exposure in premenopausal women, particularly for estrogen receptor positive breast tumors. Enhanced voltage-dependent Ca²⁺ current and impaired inhibitory G-protein function, and derangement of intracellular organelles with a Ca²⁺ buffering effect, such as endoplasmic reticulum and mitochondria have been also shown to contribute to disturbed Ca²⁺ signaling in breast cancer.

CONCLUSION:

Melatonin may modulate breast cancer through modulation of enhanced oxidative stress and Ca²⁺ influx in cell lines. However, there is not enough evidence on increased risk of breast cancer related to EMR exposure.



Practical Solutions

"**Melatonin** reduces oxidative stress induced by chronic exposure of microwave radiation from mobile phones in rat brain." *Journal of radiation research* 49, no. 6 (2008): 579-586; D. Sokolovic, B. Djindjic, J. Nikolic, G. Bjelakovic, D. Pavlovic, G. Kocic, D. Krstic, T. Cvetkovic, and V. Pavlovic.

"A novel antioxidant agent caffeic acid phenethyl ester (from **Propolis**) prevents long-term mobile phone exposure-induced renal impairment in rat." *Molecular and cellular biochemistry* 277, no. 1 (2005): 73-80; Ozguner, Fehmi, F. Oktem, A. Ayata, A. Koyu, and H. Ramazan Yilmaz.

Biomedical Research 2012; 23 (1): 147-151 Oxidative stress in hippocampus induced by 900 MHz electromagnetic field emitting mobile phone: Protection by **melatonin** Memduh Kerman¹, Nilgun Senol²

Targeting oxidative stress response by **green tea polyphenols**: clinical implications; E. C. Yiannakopoulou; Free Radical Research. Sep 2013, Vol. 47, No. 9: 667-671

Ozgur, E., G. Guler, and N. Seyhan. 2010. Mobile phone radiation-induced free radical damage in the liver is inhibited by the antioxidants **N-acetyl cysteine** and epigallocatechin-gallate. *Int J Radiat Biol* 86 (11):9

Selenium and l-Carnitine Reduce Oxidative Stress in the Heart of Rat Induced by 2.45-GHz Radiation from Wireless Devices; Y.Türker, M. Nazıroğlu, N. Gümral, Ö. Çelik, M. Saygın, S. Çömlekçi, M. Flores-Arce; *Biological Trace Element Research*. Dec 2011, Vol. 143, No. 3: 1640-1650

"Protective effects of **β-glucan** against oxidative injury induced by 2.45-GHz electromagnetic radiation in the skin tissue of rats." *Archives of dermatological research* 304, no. 7 (2012): 521-527 A. Murat, V. B. Akkaya, Ş. C. Güleçol, B. M.Ceyhan, F. Özgüner, and W. C. Chen.

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Towards a Peroxynitrite Solution

Hooper, D. C., Scott, G. S., Zborek, A., Mikheeva, T., Kean, R. B., Koprowski, H., & Spitsin, S. V. (2000). **Uric acid, a peroxynitrite scavenger**, inhibits CNS inflammation, blood–CNS barrier permeability changes, and tissue damage in a mouse model of multiple sclerosis. *The FASEB Journal*, 14(5), 691-698.

Wilson, C. W. M. "The protective effect of auto-immune buccal **urine therapy** (AIBUT) against the Raynaud phenomenon." *Medical hypotheses* 13.1 (1984): 99-107.

Cuzzocrea, S., Zingarelli, B., Gilad, E., Hake, P., Salzman, A. L., & Szabó, C. (1997). Protective effect of **melatonin** in carrageenan-induced models of local inflammation: relationship to its inhibitory effect on nitric oxide production and its peroxynitrite scavenging activity. *Journal of pineal research*, 23(2), 106-116.

Mainah, H. S., & Adriani, L. (2011). Change of blood ammonia level and efficiency of nitrogen utilization in Priangan lambs due to **klinoptilolit (Zeolite)** addition in ration. *Lucrari stiintifice. Seria Zootehnie-Universitatea de Stiinte Agricole si Medicina Veterinara Ion Ionescu de la Brad (Romania)*.

Treatment: Zeolite, ½ tsp 3- 4 times/day. Consider AIBUT tx in all neurologically impaired patients (urine contains 500-900 mg uric acid/liter). Melatonin: use larger doses of Propolis tincture (BioPure.eu)



To decrease toxic metal burden

- **Increase water intake.** Consider hydrogen water
- Regular colonics (once weekly), in between also frequent **coffee enemas**
- **Cilantro:** 2 dropperfull 3 times a day 30 min before meals (work slowly up to this dose)
- **CurcuSyn:** 2 capsules with each meal (mercury)
- **Melatonin** (Hg, Pb, Al, Cd, glyphosate)
- Consider medical chelating agents: DMSA, Desferal, DMPS, D-Penicillamin
- 20-30 min **ionic foot bath** before going to bed
- ½-1 tsp **Zeolith** 15-30 min after meals/or **Chlorella** 15 tbl. t.i.d.



Ca-Na₂-EDTA (caveat: this is not sodium EDTA!!!)

Ca-EDTA slow push/fast drip

50 mg/kg, not to exceed 3 gm

T^{1/2} about 30-45 minutes

6 hr. urine collection

DMPS challenge

IV: 3-5 mg/kg (250 mg max), **slow** push (5-10 min.)

Oral: 10 mg /kg BW (5 mg/kg children), empty stomach(empty bladder).Withhold food about 2 hrs.Encourage ~ 0.5L fluid over next few hrs. Collect all urine for 6 hrs.

German toxicologists have used up to 1000 mg slow i.v. push in patients with advanced neurological illness

DMSA challenge (oral):20-30 mg DMSA/kg BW as oral bolus on empty stomach (\leq 2 gms).

Withhold food about 2 hrs. Encourage ~ 0.5L fluid over next few hrs. Collect all urine for 6 hrs.

Give 2 gms of glycine 30 min before

J Nutr Envir Med (1998) 8:219-231

D-Pencillamine protocol- 500mg three times per day 2 days per week (R. Jaffe PhD)

Desferal: reconstitute vial with 10 ml distilled water. Inject half segmentally subcutaneously around the abdomen. The other half 2-3 days later. Keep refridgerated



- IV Vitamin C: 37-50 grams in 500 ml distilled water with 10 ml Ca gluconate
- Glutathione: 600-4000 mg 1-3x weekly, IV push (always include i.m or i.v Magnesium once-twice weekly)
- Alpha-lipoic acid: 600 mg in normal saline (250 cc) over 1 hr
- Phospholipids (Lipostabil): 2 ampoules diluted with client's blood (50:50) given slow IV over 3 minutes, then followed by glutathione
- Conventional NaEDTA Protokoll (ACAM), aka EDTA Chelation Therapy
- Zinc DTPA: 1 amp. Once weekly i.v.



What happens to Melatonin, if the transmitter of EMR stops?

Altpeter et al. 2006. **Effect of Short-Wave (6-22 MHz) Magnetic Fields on Sleep Quality and Melatonin Cycle in Humans: The Schwarzenburg Shut-Down Study.** Bioelectromagnetics 27:142-150.

Abstract:

This paper describes the results of a unique "natural experiment" of the **operation and cessation of a broadcast transmitter** with its short-wave electromagnetic fields (6-22 MHz) on sleep quality and melatonin cycle in a general human population sample.

In 1998, 54 volunteers (21 men, 33 women) were followed for 1 week each before and after shut-down of the short-wave radio transmitter at Schwarzenburg (Switzerland). Salivary melatonin was sampled five times a day and total daily excretion and acrophase were estimated using complex cosinor analysis. Sleep quality was recorded daily using a visual analogue scale. Before shut down, self-rated sleep quality was reduced by 3.9 units (95% CI: 1.7-6.0) per mA/m increase in magnetic field exposure. The corresponding decrease in melatonin excretion was 10% (95% CI: - 32 to 20%). **After shutdown, sleep quality improved** by 1.7 units (95% CI: 0.1-3.4) per mA/m decrease in magnetic field exposure. **Melatonin excretion increased by 15%** (95% CI: -3 to 36%) compared to baseline values suggesting a rebound effect. Stratified analyses showed an exposure effect on melatonin excretion in poor sleepers (26% increase; 95% CI: 8-47%) but not in good sleepers. **Change in sleep quality and melatonin excretion was related to the extent of magnetic field reduction** after the transmitter's shut down in poor but not good sleepers. However, blinding of exposure was not possible in this observational study and this may have affected the outcome measurements in a direct or indirect (psychological) way. <http://www.ncbi.nlm.nih.gov/pubmed/16342198>



What happens, when people remove or mitigate the source?

Röösli, Martin, et al. "Symptoms of ill health ascribed to electromagnetic field exposure—a questionnaire survey." *International Journal of Hygiene and Environmental Health* 207.2 (2004): 141-150

Abstract: From June 2001, health questionnaires were distributed to people who complained about symptoms of ill health which they ascribed to exposure to electromagnetic fields (EMF). The objective of the survey was to gain a better knowledge of the anxieties of complainants, to obtain hints of possible problems and of actions that should be taken to solve the problems. The survey was not designed to establish a causal association between exposure to EMF and symptoms of ill health. Within one year, 429 questionnaires were returned of which 394 persons reported symptoms. The average age of the complainants was 51.0 years and 57 percent were female. The complainants were older, had a higher educational level and were more likely to be married compared to the general Swiss population. A mean of 2.7 different symptoms were reported. **Sleep disorders (58%), headaches (41%), nervousness or distress (19%), fatigue (18%), and concentration difficulties (16%)** were most common complaints. Complainants related their symptoms most frequently to exposure to mobile phone base stations (74%), followed by mobile phones (36%), cordless phones (29%) and power lines (27%). No distinct symptoms related to a specific field source could be identified. Eighty-five percent of the people who consulted a public authority because of their symptoms were unsatisfied with the response, whereas consultation of self-help groups or building ecologists usually fulfilled expectations. Two thirds of complainants had taken some action to reduce their symptoms. The most common measure was to avoid exposure if possible. **Removing or disconnecting indoor sources was judged to be the most effective action.**