



International Guidelines on Non-Ionising Radiation

IGNIR's revised long-term guidelines

IGNIR is updating its long-term and non-thermal guidelines in May/June 2020 to include Electrosmog Quiet Zones (EQZ). They are based on mainstream scientific evidence and aim to protect better all humans.

Back-ground (safe) levels	Majority mainstream guidelines		
	Basis: majority scientific evidence		
	Long-term and short-term		
	Non-thermal and heating		
	Peak		
$\mu\text{W}/\text{m}^2$	Date	$\mu\text{W}/\text{m}^2$	
0.000001	1935	USSR	100,000
	1972	Poland	1,000
	2012	Bioinitiative	3

EHS again recognised by UK court

By reason of electrohypersensitivity, chronic pain and [REDACTED] is significantly limited, in particular as above [REDACTED] qualifies for the above award of Personal Independence Payment.

Electrosensitive whales

Gray whale strandings are associated with increases in radio frequency noise from solar storms, rather than alterations to the earth's magnetic field.

(Granger J et al.: Curr Biol., 2020)

**ICNIRP's revised short-term unscientific guidelines**

The ICNIRP guidelines of March 2020, relaxed to allow 5G, are even less protective than before. They still follow Schwan's 1953 mistaken short-term and heating-only effects, not long-term and non-thermal effects like cancer and ES. ICNIRP acts effectively as a 'front' for the wireless industry, which puts profit before health.

Background (safe) levels	Minority 'industry' guidelines		
	Basis: arbitrary invalidated hypothesis		
	Short-term only		
	Heating only		
	Averaged over 6 or 30 minutes		
	Date		$\mu\text{W}/\text{m}^2$
0.000001	1953	US: Schwan's mistake	100,000,000
	1998	ICNIRP	10,000,000
	2020	ICNIRP	40,000,000

'The Lies Must Stop: Disband ICNIRP'

"The public has been fed lies and half-truths about the health effects of RFR. Van Rongen [chair] and the other members of ICNIRP should go to the nearest blackboard and write 100

times: 'The U.S. NTP has found "clear evidence" that exposure to RF radiation can lead to cancer'." ("The Lies Must Stop: Disband ICNIRP." Microwave News, April 9 2020)

WHO's invalid claim about EHS

The WHO's absurd 2005 claim, that EHS is not linked with EMFs, is patently invalid and unscientific. (Belpomme D et al., Electrohypersensitivity ..., Int J Mol Sci, 2020).

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ES-UK and NEWS

Thank you to our supporters

Many thanks to those who give so generously. Your gifts help support our website, helpline, communications, and information campaigns. Please keep writing emails and letters about ES to local councillors, MPs, radio/TV and newspapers. The need grows ever greater.

UK court again recognises EHS

Since 2012, UK courts have recognised the existence of real physiological EHS.

A UK resident wrote in January 2020:

The Appeal is allowed. I have been assessed as scoring 15 points for Activity 9a:

"By reason of Electrohypersensitivity, leading to a loss in consciousness, [name redacted] is

significantly limited. If [he/she] were found capable of work-related activities, this would result in a substantial risk of a deterioration in [his/her] physical health. The award has been made for the next 6 years."

The claimant encourages people with EHS to press for Exceptional Circumstances for Electrohypersensitivity which is quoted in the descriptor for the award with regards to significant risk. The Judge has a legal duty at least to consider this point if, it seems, your normal work duties include an EMF environment. The rule can be found in regulation 27(b) of the Social Security (Incapacity for Work) Regulations 1997, and regulation 29(2)(b) of the Employment and Support Allowance Regulations 2008.

IN MEMORIAM

Jason Gleaves

Dr J Cuthbert writes:

"The person closest to Jason has informed me that Jason has passed on. Jason suffered from very severe ES and MCS.

Jason was known to, liked and respected by very many people with ES and MCS. He was intelligent, strong-willed and public-spirited, and a generous spirit. He helped us by sharing with us a chronicle of his worsening symptoms, reported directly and then through his devoted partner who dealt with his correspondence when this became impossible for him. Now Jason has helped us by making clear that ES and ES with MCS can be fatal.

Jason became so weak that he agreed to go into hospital. This, unsurprisingly, worsened his symptoms and he had to be put on life support and then suffered multiple organ failure. It is obscene that this should have happened to Jason and that central government and the public remain largely unaware of this tragedy.

I hope that Jason's passing will strengthen your resolve to win full rights for ES and MCS people. Jason would want this."

Robin Egan

Lorna writes:

"Older supporters of ES-UK will be saddened to hear of the death of Robin Egan after years of ill health caused by non-ionising EM radiation. Robin never despaired of convincing his medical advisers of the injustice of adhering without question to the ICNIRP heating guidelines.

Readers of the Newsletter do not need to be reminded of the conflicts of interest involved in maintaining these outdated and discredited guidelines. We with EHS know that Robin was right, but very few of us have the courage and tenacity to take the fight to the medical profession as Robin did, with results not always to his advantage. He was a firm friend and a loyal supporter of ES-UK and is sadly missed."

Sue Kerley

We were very sorry to hear of the death of Sue Kerley on March 12 2020 in a nursing home.

Lisa Tylor RIP

Electrosensitivity UK expresses its sympathy to the relatives and friends of the late Lisa Tylor of Lincolnshire who died in January 2020 aged 41.

Kate Figes (1957-2019)

We were very sorry to hear of the death of Kate Figes, author and journalist, on December 7 2019, and extend our deepest sympathy to her family and friends. In November 2006 she published her experience of electrosensitivity from Wifi installed in her home. It was a characteristically brave admission. Although ignorant critics hurt her deeply, her openness was a great support to many similar sufferers.

Photo: Kate Figes website



From obituaries in the Guardian and Times:
She studied Arabic and Russian at what is now the University of Westminster. On a placement in Russia she met her husband to be, Christoph Wyld, who became a foreign news editor at the BBC. Writing, for Figes, was a way to channel her interest in the world around her. In 1996 she became books editor for the Mail on Sunday's You magazine, a position she held until her death. She had an "enormous, boisterous laugh", along with loyalty and a fierce zest for life. She retained her joie de vivre after receiving a diagnosis of breast cancer in 2016, writing about how the disease enhanced her appreciation of everyday experiences such as watching a box set, petting her dog, or playing Scrabble. 'The one thing that really matters with a shortened life expectancy is to bury every hatchet of regret and unhappiness, so that I can live free from that past in the time I have left.' "I don't believe that any of us can ever accept the inevitability of our own death. Life is too bloody wonderful' she wrote in her final piece of journalism for the Daily Mail on Nov. 24 2019.

(Claire Armitstead: "Kate Figes obituary, The Guardian, December 9 2019; Obituary: Kate Figes, The Times, November 23 2019)

"Author Kate Figes, spent hundreds of pounds installing wireless internet in her Stoke Newington home, then found it made her so ill she had to scrap it. Ms Figes, 49 in 2006, claims she is so sensitive to wi-fi's EM waves she can instantly tell whether it is installed in a particular room. Ms Figes said: "The day we installed wi-fi two years ago was the day I started to feel ill. At first I could not work out what the problem was. I had no idea why I felt so sick and run-down. But

I knew that when I walked through the front door it felt like walking into a cloud of poison. Imagine being prodded all over your body by 1,000 fingers. That is what I felt when I walked into the house... Then I started to think it might be the wi-fi, so we scrapped it - and I felt better."

(Kate Figes: "Wireless technology made me sick" Evening Standard, November 23 2006)

"I am no luddite - this new technology is astounding, exciting and it changes people's lives. I welcomed it with as much enthusiasm as the next person before I noticed how ill it made me feel. I resisted the urge to get rid of Wi-Fi for nearly a year because it seemed so useful. ... I think this should be seen as a fundamental contravention of human rights rather than simply as a health issue. The government and the telecoms industry sit happily in each other's pockets and we have no say, no way to stem the tide or voice objection. Without any sense that we have a political party or government prepared to take this issue seriously, ordinary people have no choice but to become activists - campaigning against mobile phone masts that have been erected without planning permission in the heart of their communities and lobbying schools not to install Wi-Fi near where their children are supposed to be able to learn."

(Kate Figes: "A wireless warning" The Guardian, December 5th 2006)

ES NEWS

Italy: school Wifi shut down to protect ES pupil

On January 27 2020 the Court of Florence ordered the immediate shutdown of Wifi to protect the health of a minor. This emergency procedure, as emphasised by Agata Tandoi, the lawyer defending the pupil 'Mario' (invented name), is a preliminary act resulting from the presumption of the existence of sufficient environmental barriers for the pupil.

The judge, in fact, ordered the dismantling of the Wifi routers well before the final verdict, convinced that further delay could cause serious damage to the protection of the child's health, immersed in the EM electrosmog of the school.



Judge Zanda noted that the school near the Arno is currently irradiated by non-ionizing waves Wifi EMFs dangerous for human health, which is all the more risky for 'Mario' suffering from a serious pathology shown by the doctors as already proven "sensitivity to electromagnetic fields".

The magistrate affirmed how internet access can be well guaranteed through systems without electrosmog and the

use of wireless Wifi, as in the farsighted Decree of January 11 2017 issued by the former Environment Minister Gian Luca Galletti, since schools can always opt for the safer cable. (Maurizio Martucci: "In Florence the Tribunal turns off Wifi at school. An extraordinarily innovative act" Il Fatto Quotidiano, January 28 2020, Trans.)

Light sensitivity disability discrimination compensation

Rajni Duggal, a HBOS bank consultant in London who has light sensitivity, was awarded £10,000 for injury to feelings and £827.82 interest by the Central London Employment Tribunal on the grounds of disability discrimination.

She was forced to work in an office with fluorescent light despite management knowing that it gave her migraines and dizziness. She joined HBOS in 2008 and was diagnosed with the condition in 2009.

It took HBOS almost 11 months to make the necessary environmental adjustments, although best practice gives a maximum of 30 days and the cost was 'unlikely to be significant'.

("Bank worker wins bright lights payout" Times, March 30 2020)



Rugby star: Keep EMFs out of the bedroom

Jonny Wilkinson's answer to the question: "What's on your bedside table?" "Not a lot — we don't have phones in our room. We're very particular about being away from electromagnetic frequencies in the bedroom and making rest as pure as possible."

(Helen Gilbert: "Jonny Wilkinson interview: the rugby star talks compost, kombucha and spirituality" Sunday Times, February 23 2020)



Beyond-smart in home trends: 'rethinking radiation levels in the nursery'

"Is this the end of the smart-home gold rush?" The so-called 'smart home' drive reached its zenith in 2014-15, according to Hugo van Bilderbeek, of HvB Development, and Steve Howat, of London Projects:

"Today, that trend has swung to the other extreme. We think the smart-home gold rush is coming to a close." There is a growing awareness of how technology impacts health and well-being, something noticed by Silicon Valley giants denying their children access to tech.

Lucinda Croft of Dragons of Walton Street said: "Our clients are much more aware nowadays not only of their physical well-being, but of their

mental health and the need to disconnect. We're seeing a rise in people wanting to rethink ... the radiation levels in and around the nursery."

Some are defining tech-free zones at home, with an EMF kill-switch for all bedrooms at night, or specific tech-free rooms.

(Arabella Youens: "The ultimate property luxury: unplugging" Daily Telegraph, February 22 2020)



'Prison Without Bars'

This new French documentary on environmental intolerances by directors Nicole Giguère and Isabelle Hayeur (73 min. for release February 17 2020) includes people suffering from electrosensitivity. It was made in Quebec in French with English subtitles, and includes

Dr Paul Héroux and Dr Belpomme.

Its synopsis reads: "Our environment is saturated with chemicals and electro-magnetic fields. The adverse effects of these massive exposures affect a growing number of individuals, including Isabelle, Kathya, Jean-François, Sylvain and Jayden. A glimpse into the

little-known world of environmental illness."

In the CBC radio interview it is emphasised that for both chemical and EMF sensitivity avoidance is the only solution, along with measuring the toxins. ("All in a Weekend with Sonali Karnick" CBC radio interview on Prisons Without Bars, February 9 2020, 11 minutes)

ES & EHS STUDIES

Since 1932 there have been numerous scientific and medical studies proving ES and EHS. The WHO 'misinformation' sheet of 2005 is entirely wrong in denying the link between ES/EHS and EM exposure and should be withdrawn immediately.

The WHO is wrong: yet another study on EHS diagnosis

"Since 2009, we built up a database which presently includes more than 2000 electrohypersensitivity (EHS) and/or multiple chemical sensitivity (MCS) self-reported cases. ... EHS and MCS can be characterized clinically by a similar symptomatic picture, and biologically by low-grade inflammation and an autoimmune response involving autoantibodies against O-myelin. Moreover, 80% of the patients with EHS present with one, two, or three detectable oxidative stress biomarkers in their peripheral blood, meaning that overall these patients present with a true objective somatic disorder. Moreover, by using ultrasonic cerebral tomosphygmography and transcranial Doppler

ultrasonography, we showed that cases have a defect in the middle cerebral artery hemodynamics, and we localized a tissue pulsometric index deficiency in the capsulothalamic area of the temporal lobes, suggesting the involvement of the limbic system and the thalamus. Altogether, these data strongly suggest that EHS is a neurologic pathological disorder which can be diagnosed, treated, and prevented. Because EHS is becoming a new insidious worldwide plague involving millions of people, we ask the World Health Organization (WHO) to include EHS as a neurologic disorder in the international classification of diseases."

(Belpomme D et al., Electrohypersensitivity as a Newly Identified and Characterized Neurologic Pathological Disorder: How to Diagnose, Treat, and Prevent It, Int J Mol Sci, 2020)

'Public places should be accessible for EHS'

"Clearly, many individuals have sensitivity to EMF which decreases the quality of life and often leads to disability.... Exposure limits should be lowered to safeguard against biologic effects of EMF. Spread of local and global wireless networks should be decreased, and safer wired networks should be used instead of wireless, to protect susceptible members of the public. Public places should be made accessible for EHS individuals."

(Stein Y et al.: "Electromagnetic hypersensitivity (EHS, microwave syndrome) - Review of mechanisms" *Environ Res.*, 2020)



MRI technologists: ES symptoms

MRI technologists suffer ES symptoms: "Similar to previous research, dizziness was the most frequently reported symptom. Participants identified symptoms that had not been reported previously, such as radiculopathy (pain, weakness, and numbness) and dropping things."

(Walker M et al.: "Symptoms Experienced by MR Technologists Exposed to Static Magnetic Fields" *Radiol Technol.*, 2020)

EMFs cause antibiotic resistance

EMFs from a mobile simulator at 900 MHz can cause bacterial resistance against antibiotics and can increase the permeability of the cell wall of bacteria. (Movahedi MM, et al., *J Biomed Phys Eng.* 2019)

Heart failure rises a third in five years – RFR?

The number of people being admitted to hospital due to heart failure has risen by a third in the last 5 years, 3 times as fast as all other hospital admissions, which have risen by only 11%. (Imogen Blake: "Heart failure hospital admissions rise by a third in five years" British Heart Foundation, November 4 2019)

Power lines: 2.9 risk of brain tumours

For the association between residential proximity to power lines and brain tumors among adults in France, using CERENAT, a population-based case-control study in France in 2004-2006, and

geographical data sources on power line location: "We found significant associations between cumulated duration living at <50 m to high voltage lines and: i) all brain tumors (OR 2.94); ii) glioma (OR 4.96)."

(Carles C et al.: "Residential proximity to power lines and risk of brain tumor in the general population" *Environ Res.*, 2020)

Genetic risk of thyroid cancer from mobiles

In 2019, Dr Yawei Zhang, Associate Professor at the Yale School of Public Health in New Haven, published an epidemiological study on the possible link between thyroid cancer and cell phones.

Zhang's follow-up (Luo J et al., *Env Res.* March 2020) could well change the way people think about cell phone cancer



risks. She found that some people, with small DNA variations affecting 7 genes regulating DNA repair, have an innate susceptibility to thyroid cancer when exposed to cell phone radiation.

("Cell Phones and Cancer: Your Genes May Tell the Story. Genetic Susceptibility and RF Radiation Modulate Thyroid Cancer" *Microwave News*, January 21 2020; "Thyroid Cancer, Genetic Variations, and Cell Phones Linked in New Yale School of Public Health Study" *Yale School of Public Health*, January 17 2020)



Pregnancy: mobiles more harmful in Wifi

"The results of this study indicated that mobile phone exposure during pregnancy could have an important potential to cause oxidative stress and DNA damage in cord blood and placenta. The results of this study also indicated that combined effects of Wi-Fi plus mobile phone exposure have a higher potential to cause synergistic harmful effects." (Bektaş H et al.: "Comparison of effects of 2.4 GHz Wi-Fi and mobile phone exposure on human placenta and cord blood" *J Biotechnology & Biotechnological Equipment*, 2020)

LIVING WITH EHS

Do you know the number of people living with handicaps?

Which groups of people in the UK do these numbers represent?

(% of the UK population of about 67 million)

- (a) 103,000 (0.15%)
- (b) 107,000 (0.16%)
- (c) 145,000 (0.2%)
- (d) 350,000 (0.5%)
- (e) 600,000 (1%)
- (f) 700,000 (1.04%)
- (g) 804,000 (1.2%)
- (h) 850,000 (1.3%)
- (i) 1,184,000 (1.87%)

Answers: These are the number of people in the UK with:

- (a) Crohn's ([Crohn's and Colitis](#), 2020)
- (b) Multiple Sclerosis ([MS-UK](#), 2020)
- (c) Parkinson's ([Parkinsons.org](#), 2020)
- (d) Registered blind & partially sighted (2011 fig. [Stat.Res](#), 2018)
- (e) Epilepsy ([Epilepsy Action](#), 2020)
- (f) Autism ([National Autistic Society](#), 2020)
- (g) Severely affected by EMFs ([Bevington M](#), 2019)
- (h) Dementia ([Prince M et al. Alzheimer's Society](#), 2014)
- (i) Wheelchair users ([Perry FC, Muscular Dystrophy UK](#), 2015)

EMF Practical Guide

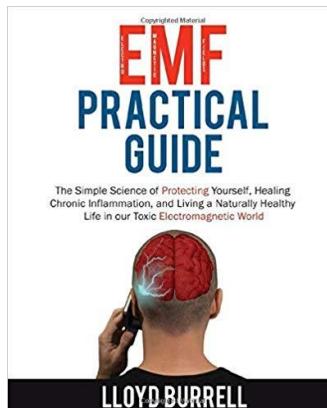
Lloyd Burrell has written a masterly guide on the dangers of EMF and how to protect yourself. It assumes no prior knowledge and treats the science seriously but not in overwhelming detail. He explains why we lack government and industry protection.

The Guide is best at advising on how to reduce exposures from common devices, often with three levels of explanation for each: Free And Easy, Intermediate and Advanced. There are separate chapters on your cell phone, Wi-Fi, wiring, dirty electricity, low EMF bedroom tips, computers and Bluetooth, cell tower protection, and smart meters.

Lloyd helpfully recalls how he was sensitised in 2002 through a mobile phone and shows how he can now cope with many or all exposures. However, he does not explain why some people are more sensitive than others, through genetic factors, viruses, or immune, inflammatory or other conditions. Therefore the final chapter called 'Enjoying the Ride' may seem dubious to some readers, but at least it can give hope to many.

One of Lloyd's most pertinent comments is: "Unfortunately, I've noticed most people don't get it until they experience it themselves. That's to say they don't understand the consequences until they experience it themselves.' This excellent guide should help people to understand and begin to resolve some of the problems we all face.

(270 pages, 2019, Electricsense. ISBN-13: 978-2957080526, 19 x 1.7 x 23.5 cm, or E-book. £15.38. Available from Amazon)



Fitbit dangers

David Webb reports that a Garmin vivofit Fitbit watch emitted up to 2V/m and over 550 uW/m² = 0.455V/m and while transmitting data to a mobile phone [taking into account that produced by the mobile phone] increased to 3000 uW/m² = 1.063V/m. Fitbits are a Bluetooth device [2.4GHz] with range to around 10 metres.



Bluetooth speaker not in use still emits radiation

"I bought a bluetooth Bose speaker recently. I assumed when it wasn't operational it would not be giving out any radiation. Just lately I have been having a strange crawling sensation



over my shoulder. It was getting worse and worse and driving me nuts. I discovered the bluetooth speaker was emitting radiation while it was switched off! These readings were pulsed and at the top end of the meter, i.e. completely red!"

Dr Magda Havas: empowering insights on ES and EHS - 'a global epidemic'

Notes of Dr Havas talking about ES/EHS with André Fauteux:

- Dr Havas labelled EHS in 2008 as 'Rapid Aging Syndrome' because the EM oxidative stress effectively ages all cells in the body more rapidly than in a clean environment.
- People with ES/EHS are effectively 'Home Refugees' to avoid electrosmog outside.
- Dr Havas' experiments in schools showed that a third of teachers were clearly ill because of dirty electricity on the wiring.
- She showed with a 'Lightbee' detector, which converts flicker into sound, how noisy some CFL or LED lights are compared with a silent tungsten bulb.
- She estimated 3% (1 million people) of 30 million Canadians were EHS and 33% (10 million) mildly sensitive.
- She considered ES/EHS counted as a global epidemic.
- Electrosmog has grown enormously and quickly, especially from Wifi.
- She felt that people with ES/EHS should find knowledge about the condition empowering, not scaring



Assessment protocol:

1. *Light bulbs* (CFLs, which have RF, dirty electricity and UV): severe, mild or no reactions?
2. *Symptoms*: aging, as explained above.
3. *Precursors*:
 - (a) Physical trauma to the nervous system.
 - (b) Chemical exposure including metal as in dental fillings.
 - (c) Electrical exposure, as in lightning, shock, RF etc.
 - (d) Biological, e.g. mould, parasites and Lyme, where the bugs respond to electrosmog.
 - (e) Impaired immune system, as in lupus, cancer, AIDS, being very young or old.
4. *Exposures*, as from celltower, phones, Wifi, TV.
5. *Provocation tests* when ethically possible.
Live blood and Rouleaux formation: Dr Sinatra: it should look like red wine, not Ketchup, HRV indicating sympathetic stress in the presence of a cordless phone but parasympathetic without. Everyone, especially children in schools with Wifi, should be screened for heart sensitivity to RF like Wifi.

Treatment

1. *Reduce exposure and remove EMFs*, a neurotoxin; this can help people with MS; in one case most lesions were gone after seven years with EMFs removed, 2001-08.

2. *Record ICD-10: W.90.0 injury from RF; W.90.8 injury from other NIR such as ELF.*
3. *Address the limbic system.*
4. *Support the immune system*, with essential nutrients and healthy living.
5. *Detoxify*, e.g. mercury from dental fillings.

Summarised as RIDE:

Reduce exposure by treating the environment
Treat the person: Immune system,
Detoxification,
Emotional health.

Building biologists can help with the first.
Buying meters can help for identifying ELF, dirty electricity and RF, with the LightBee for sound measurements from LEDs.

Government guidelines for health safety are in effect non-existent; government guidelines cover only one of three elements: (i) heating for RF and shock for ELF. They should also include (ii) free radical damage and oxidation, and (iii) information exchange within all organisms.

Governments and health services need to undergo a paradigm shift from seeing humans as chemical beings to seeing them as energy beings and beings of light.

Neurological illnesses are becoming more common as electrosmog increases.

(Interview by André Fauteux: "Magda Havas on recovering from electrohypersensitivity" La Maison du 21e siècle, February 24 2020, 72 min.)

LIVE CHECKING OF RFR LEVELS

UK: no live RFR levels available

The UK lacks the live and updated RFR measurements which Greece and Serbia provide.

Ofcom: only short-term, not long-term, data

In February 2020 Ofcom published data on 4G+5G in relation to the ICNIRP's short-term heating-only guidelines, not international protective long-term and non-thermal guidelines. Nevertheless, these showed that levels were probably hundreds or thousands of times above international long-term and non-thermal guidelines (e.g. Bioinitiative, EUROPAEM EMF Guidelines 2016, IGNIR).

Greece: check RFR levels

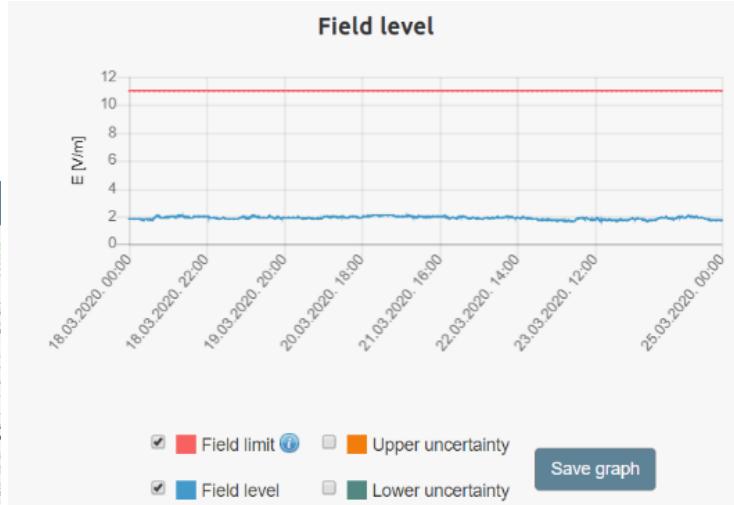
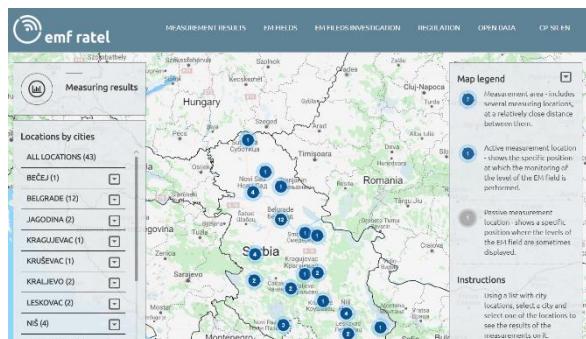
The National Observatory of Electromagnetic Fields started in 2015. It is a network of 500 fixed (480 broadband and 20 frequency selective) and 13 mobile (vehicle mounted frequency selective) measurement stations throughout Greece operated by the Greek Atomic Energy Commission (EEAE). Results are available on: <https://paratiritirioemf.eeae.gr/en/measurements/map>

		Back-ground = Safe	<i>ICNIRP Limits</i>		<i>Greece (February 2020)</i>		<i>Greek Limits</i>	<i>ICNIRP Heating only, short-term</i>		
			<i>Non-thermal, Long-term</i>							
			<i>Sensitive >4 hours</i>	<i>Daytime >4 hours</i>	<i>typical rural</i>	<i>typical urban</i>				
Electric field	V/m	0.000002	<0.02	0.2	0.3	1.5	21	61		
Power density	$\mu\text{W}/\text{m}^2$	0.000001	<1	100	500	8,000	1,210,000	9,400,000		

Serbia: check RFR levels

Updated measurements of Electric Field (V/m), typically about 1.5 V/m to 2.0 V/m for town and urban locations.

<http://emf.ratel.rs/eng/rezultati-merenja/>



I can only see so far

By Roger Moller

From the hill upon which I stand, I can only see just so far. This hill is built on the lives of my ancestors, more specifically upon those of my parents who nurtured and raised me. It is also built by me through my experiences and learning. By necessity it is limited, for how else

might I be encouraged to step out into the wider world to explore and fulfil my highest potential?

I hold a vision, no, it remains merely a dream, of a community in which I can grow old.

When I was 50 I decided I had 10 years to build the sort of environment in which I wished to end my days. Now, some 15 years later, it is

no further near fruition than it was then, but my thinking has evolved.

Having become EHS in 1997 after having already lived 20 years with multiple chemical sensitivities (MCS), the last 23 years have been spent recovering from MCS and attempting to dodge the wireless monster that still stalks me. I am not alone and many others across Britain and the world yearn for a place simply ‘to be’, with security and devoid of the attackers that relentlessly persecute them and steal their opportunities every day.

A community based on some shared disability or old age is not what I have in mind. There has to be something larger, something greater than the individual to unite people for it to be held together through thick and thin. Typically, this has been family or religion but I

am not enamoured with tribes or doctrine so I joined the Quakers to see how a non-religious community, albeit one based on Christian principles, could function in practice.

What we all need is a habitat conducive to our lives, one that enable us to live and grow to our highest potential. What we all yearn for is ‘good neighbours’, fellow travellers who do not impose on our wellbeing, who contribute to our security and who may provide help or inspiration if we need it.

As a species, we are co-dependent. We cannot do life alone or entirely on our own terms. I doubt whether you are any different. If this reflects your thinking too, and further to Peter Lloyd’s article in the last Newsletter, I encourage you to write and add to the discussion.

Replacing ICNIRP: <0.1 V/m and Outdoors Only?

Urgent need for long-term guidelines:

<0.1 V/m, Outdoors Only?

Now that most mainstream scientists have rejected ICNIRP’s short-term limits as unscientific and not protective, there is an urgent need to adopt international long-term guidelines which protect all people.

There are at least five key issues:

- 1. Protection:** from all established long-term effects, e.g. cancer, infertility and electrosensitivity.
 - 2. Outdoors / Indoors:** the guidelines should apply outdoors, with no wireless allowed indoors.
 - 3. Litigation:** ‘Given the way the current product liability law works, an able lawyer might well convince a jury that exposures within the current limits have caused cancer, cognitive disabilities in children, etc., which could cost billions of dollars’ (Barnes et al., 2020).
 - 4. Practicality:** some may want to retain limited wireless radiation for, say, emergency services.
 - 5. Choice:** a few people may prefer the risk of cancer etc. to health, as in smoking, but passive irradiation of people who do not consent to this risk could rule out such an individual choice.
- Safety guidelines are set some 100 to 50 times below biological effects.
 - Barnes et al (2020) suggest 0.1 V/m as a starting point, based on practicality, not research.

(Barnes F et al.: “Setting Guidelines for Electromagnetic Exposures and Research Needs” *Bioelectromagnetics*, 2020)

(Christian Rappaz: “5G: “We’re being lied to about the consequences”” illustre.ch, February 6 2020, translation TBH, February 7 2020)

Long-term safety guidelines				
*maximum limits			Key metric	Secondary
			*Electric field V/m	*Power density μW/m ²
<i>Background natural safe level</i>		0.00002		0.000001
IGNIR	2018	children, sensitive	≤ 0.02	1
Bioinitiative	2012	children	0.03	3
Bioinitiative	2012	adults	0.05	6
IGNIR	2018	night	0.06	10
Barnes et al.	2020	practical	0.1	30
C. of Europe	2011	preventive	0.2	100

Cell phone radio waves have insufficient energy to damage DNA and cause serious illness - an enduring fallacy

A commentary

By Emeritus Professor Denis L Henshaw

Introduction

It is said that, unlike X-rays and gamma-rays, the energy of the electromagnetic radiation* (radio waves) used by cell phones is insufficient to ionise atoms or molecules and therefore cannot damage DNA and cause illnesses such as cancer.

This ancient assertion has been put more explicitly: *radio waves used by cell phones lack the quantum energy to eject electrons from atoms or molecules and therefore cannot cause cancer.*

Both forms of the assertion are a fallacy.

To explain this fallacy, we first need to understand the precise meaning of these statements. In physics, ionisation refers to the ejection of electrons well away from their parent atom or molecule. The situation is different to that, familiar to chemists, of ions in solution.

X-rays and gamma-rays come in individual wave packets called photons. Each photon has energy, known as its quantum energy. The energy is indeed sufficient to cause ionisation.

Radio waves are ultimately composed of photons and indeed the individual energy of these photons is insufficient to cause ionisation – this is why radio waves are termed *non-ionising radiation*. There is, however, a crucial difference between radio waves and X- and gamma-rays that I will come on to later.

Most known cancer-causing agents (carcinogens) are non-ionising

Here is a simple question: If cell phone radio waves cannot cause cancer *because* they are non-ionising, then how do asbestos particles, cancer viruses and carcinogenic chemicals cause cancer because none of these are ionising in the sense of ionising radiation?

The answer is also simple. Asbestos particles, cancer viruses and carcinogenic chemicals cause cancer by distinct processes and *not* by ionisation.

[I estimate less than 1% of annual cancer deaths in the UK population can be attributed to ionising radiation, such as from radon-induced lung cancer. The rest, if there are attributable causal factor(s), arise from agents or factors that are non-ionising].

So, are there distinct processes by which cell phone radio waves could cause cancer? The answer is yes as I will explain in more detail later.

But first, a little more about the action of ionising radiation in biology.

Historically, it was known that when biological cells were irradiated by X- or gamma-rays this resulted in differences in chromosome structure, indicative of DNA damage, which was visible under the microscope. The 1946 textbook by D E Lea traces the history of these findings. The DNA damage was not observed directly at the time of irradiation of the cells, rather later when the cells were dividing and individual chromosomes were visible.

The differences in chromosome structure were initially termed *changes in chromosome architecture*. Later, the term *chromosome breakage* was introduced and therefore the idea that the chromosomes, and hence the DNA had been *broken* by the radiation. Furthermore, the site of these chromosome breaks were assumed to correspond to the actual points where radiation hit the DNA.

The Bystander Effect.

The above concepts became established in radiobiology and endured for 50 years.

Then, in 1992 scientists at Harvard, USA, found that cells that had not been irradiated with ionising radiation but were in the vicinity of those that had, exhibited the same chromosome damage as the irradiated cells. This profound observation was quickly confirmed by others, indeed the effect was also found in cells grown in the same culture medium as irradiated cells, but had never been anywhere near the irradiated cells or the actual radiation.

These findings, since termed *The Bystander Effect*, showed that direct damage, such as that by ionising radiation, is not required to induce DNA damage in cells. The effect has since been shown with genotoxic chemicals, metals and nano-particles.

Genomic Instability, ionising radiation and magnetic fields

Also in 1992, scientists at the former UK MRC Radiobiology Unit at Chilton, exposed blood cells to ionising (alpha-particle) radiation. Instead of looking at the first cell division, the authors waited 10 – 15 cell divisions, after which a miscellany of radiation damage appeared. This observation, known as *Genomic Instability* has since been confirmed with both ionising radiation and chemical agents. Genomic Instability has since been recognised as a hallmark of cancer progression.

Together, the *Bystander Effect* and *Genomic Instability* have transformed our understanding of radiation biology away from direct quantum energy ‘hit–effects’ towards complex ongoing ‘cellular responses’ shared by DNA damaging agents in general, including magnetic fields.

In 2014, scientists at the University of Eastern Finland, using human neuroblastoma cells, demonstrated that *magnetic fields** also engender Genomic Instability, a finding that has been replicated.

This is a profound observation. While the magnetic fields were of the type associated with powerlines and our electricity supply rather than the specific magnetic component of electromagnetic radiation (radio waves), they demonstrate that **in this regard magnetic fields behave just like any other carcinogen.**

So how might cell phone radio waves damage DNA?

To reiterate, the individual energy of radio wave photons is insufficient to cause ionisation. However, this argument confuses what is called “*Quantum Physics*” from the traditional “*Classical Physics*”.

X-rays or gamma-rays tend in practice to be well spaced out so that their ionising action is that of a single photon. In complete contrast, a magnetic field associated with for example a typical cell phone consists of a rather massive number of photons (in technical terminology around $1e+20$ of them per cubic wavelength). As such, we are not concerned with the energy of *individual photons*, rather the *coherent energy* of the whole group. Such energy far exceeds the individual “quantum” energy. The technical aspects of this basic flaw in the “quantum energy” argument have been discussed by Dr William Bruno, Los Alamos, USA.

The Radical Pair Mechanism of magnetic field interaction with biological systems.

The *Radical Pair Mechanism* or RPM is deeply rooted in basic physics and chemistry. Its home is in so-called spin chemistry, originating in the 1960s. However, the concepts involved date from the late 19th Century and the discovery of the Zeeman Effect in 1896 for which Pieter Zeeman was awarded the Nobel Prize in 1902.

The RPM is the process by which low intensity magnetic fields can alter the spin state of pairs of free radicals from the so-called short-lived singlet state (nano-second lifetime) to the so-

called longer-lived (micro-second lifetime) triplet state making them more available to cause biological damage. The process operates at energy levels *some ten million times lower than thermal energies*. It has been widely discussed in chemical and biological systems and in the context of human health.

The RPM has been particularly successful in offering a mechanism to explain the action of the magnetic compass in animals, for example the ability of birds, other species including potentially humans, to detect tiny changes in the Earth's magnetic field for navigation and migration. The process is believed to act via cryptochrome protein molecules in the eye. Such molecules including those in humans have been shown to be magneto-sensitive.

The experimental evidence supporting the role of the RPM in magneto-reception lies in the ability of magnetic fields in the radio wave band to disrupt animal compass orientation. Of particular interest here are the observations by scientists at the University of Oldenburg, Germany that ambient electromagnetic radiation from nearby radio transmitters disrupts the orientation of migratory birds in captivity.

Summary

The idea that since cell phone radio waves do not have the quantum energy to damage DNA and therefore cannot cause ill health is a fallacy. It is flawed at a number of levels, from the very physics upon which it is supposedly based, to chemistry and biology. Most of all, the idea is not born out by the tens of thousands of peer-reviewed studies reporting biological effects from exposure to electric, magnetic and electromagnetic fields and electromagnetic radiation, including those associated with radio wave frequencies used by cell phones.

*Denis L Henshaw, Fellow Collegium Ramazzini,
Emeritus Professor of Human Radiation Effects, University of Bristol*

11th April 2020 – Updated 16th April 2020 – V3

*Explanation of technical terms

- In simple terms, *electromagnetic radiation* consists of electric and magnetic waves which are intrinsically linked and which travel through the air at the speed of light. Radio waves including those used by cell phones, visible light, X- and gamma-rays are all forms of electromagnetic radiation and are part of the *electromagnetic spectrum*.
- A *magnetic field* is an area where one can experience a magnetic force, for example around a fridge magnet. Similarly, an *electric field* is an area where one can experience an electric force, for example one created by static electric charge. Electric and magnetic fields exist around powerlines (where in essence they exist separately) without radiating away from the powerline.
- So what is the difference between *electromagnetic fields* (EMF) and *electromagnetic radiation* (EMR)? Let's start with the magnetic field around a bar magnet sitting on a table. The magnetic field is stationary, it does not move. Now wave the magnet around. The associated magnetic field is now also moving around. In doing so, it radiates into the air. So does a moving electric field. A radiating magnetic field will generate an associated radiating electric field and *vice versa*, hence electromagnetic radiation. Importantly, the electric and magnetic fields around powerlines while they are changing 50 times per second in the UK and Europe and 60 times per second in the USA, this is too slow to result in any meaningful electromagnetic radiation from powerlines. Indeed, if there were such radiation, the powerline would be acting as an aerial transmitting power into the air rather than down the powerline!

Scientific references: ES-UK website, Resources, section 14: <http://www.es-uk.info/wp-content/uploads/2020/04/14.01-Prof.Henshaw-Non-ionising-radiation-quantum-energy-fallacy.pdf>

UK GOVERNMENT AND ARMY: CENSORSHIP AND MISINFORMATION

One disturbing result of coronavirus is censorship, with lies put out through the media. YouTube, Facebook and Twitter remove any content they dislike, even scientific discussions, against the basic principles of free speech, while Google has changed its search algorithms. Equally alarming is the use of the army's 'Troll Farm' 77th Brigade. Since government ministers have denied the mainstream scientific evidence, that RFR can weaken the immune system, it appears that they may be deploying the army to promulgate misinformation against UK citizens.

Army's 77th Brigade: 'waging war' on 'own population'

General Sir Nick Carter, chief of defence staff, announced at the daily Downing Street press briefing on April 22 2020: "We've been involved with the Cabinet Office Rapid Response Unit, with our 77th Brigade helping to quash rumours from misinformation, but also to counter disinformation." In January 2018 he said: "I think it's important that we build on the excellent foundation we've created for Information Warfare through our 77th Brigade, which is now giving us the capability to compete in the war of narratives at the tactical level."

Mike Robinson commented that "Carter has acknowledged that the British military is waging war on a section of its own population."

(Liam, editor: "Special Mention for the 77th Brigade: General Carter Praises British Army's Information Warfare Capability" Warfare Today, January 31 2018; Mike Robinson: "The British Military Information War Waged On Their Own Population" UKColumn, April 26 2020)



Cabinet Office Rapid Response 'Fake News' Unit of 2018

The Rapid Response Unit, set up by the Cabinet Office and Number Ten in April 2018 to monitor and combat "fake news" and disinformation online, was deemed a success by the government in February 2019. Dubbed the "fake news unit", it can push its own content on social media and boost Google rankings of relevant government information in response to what it describes as "sensationalist" stories.

(Charlotte Tobitt: "Government's 'fake news unit' secures funding to continue battle against disinformation online" Press Gazette, February 21 2020)

DCMS 'counter disinformation unit' of 2020

A new so-called "counter disinformation unit" will see Whitehall staff identify and respond where necessary to inaccurate or misleading stories and posts about coronavirus. The Department for Digital, Culture, Media and Sport said the aim of the unit was to "provide a comprehensive picture on the potential extent, scope and impact of disinformation".

(Charlotte Tobitt: "Government creates team to tackle coronavirus 'fake news'" Press Gazette, March 9 2020)



Cabinet Office rebutting 'the health threats from 5G'

Oliver Dowden, Secretary of State for Digital, Culture, Media and Sport, known as the Culture Secretary, told the DCMS Committee that the Cabinet Office rebutted about 70 false claims per week since the coronavirus crisis hit the UK. He said that the Cabinet Office is leading on the "rebuttal of false narratives" as part of the unit, but that it also involves the Home Office, DCMS, Number 10 and other agencies. The DCMS role is to work with social media companies and encourage them to "beef up" their systems for the removal of problematic content, Dowden said. "Traditionally the disinformation cell has been used ... to counter the threat of hostile state interference in democratic events. But we took the view that in respect of this

unprecedented public health crisis and the risk of misinformation we should step it up." "We certainly saw this in respect of the nonsense that was going around about the health threats from 5G, that in rebutting it you can expose it to a much larger audience." Dowden particularly praised the BBC for showing "some of its very best during this crisis".

(Charlotte Tobitt: "Cabinet Office rebutting 70 false coronavirus claims per week since outbreak began" Press Gazette, April 22 2020)

Disinformation: UK 77th Brigade 'Facebook Warriors' and NATO

On April 15 2020 the UK Ministry of Defence and Ben Wallace announced that "the British Army will be deploying two experts in countering

disinformation. They will advise and support NATO". The 77th Brigade specialising in psychological warfare was established in 2015 and has included a Twitter executive.

(Glen Greenwald, Andrew Fishman: "Controversial GCHQ unit engaged in domestic law enforcement, online propaganda, psychology research" Intercept, June 22 2015; Carl Miller: "Inside the British Army's secret information warfare machine" Wired, November 14 2018; Archie Hall and Helen Worrell: "Twitter executive is British Army information warfare unit reservist" Financial Times, September 30 2019; Laurie Clarke: "Twitter needs to start exposing the UK's murky online propaganda" Wired, October 8 2019; Samantha Bradshaw and Philip N. Howard: "The Global Disinformation Order: 2019 Global Inventory of Organised Social Media Manipulation" University of Oxford, 2019; Ministry of Defence and Ben Wallace: "Army experts boost NATO fight against COVID-19 disinformation" UK Government, April 15 2020; Joey D'Urso: "The British Army's Information Warfare Unit Is Helping Combat Coronavirus Misinformation" BuzzFeed, April 22 2020)

FULL FACT, DCMS, RFR AND EMFs

Full Fact wrong

- "There is no evidence that 5G networks are harmful to health"

► *This is a fringe unscientific viewpoint, since 5G uses RFR. Full Fact should follow the mainstream scientific evidence which has long accepted that RFR can cause ill health, as shown in the WHO/IARC's 2B human carcinogen classification and the FDA/NTP's 'clear evidence' that mobile phones cause cancer.*

- **Full Facts is allegedly funded by Facebook, Google Grants, Vodafone Techstarter et al..**

(Kate Lewis: "5G is not accelerating the spread of the new coronavirus" Full Fact, March 31 2020)

Full Fact wrong

- "Radio waves are found at the low-frequency end of the spectrum and—alongside microwaves, visible light and heat—only produce non-ionising radiation. This means that these waves cannot damage the DNA inside cells, which is how waves with higher frequencies (such as x-rays, gamma rays and ultraviolet light) are thought to cause cancer."

► *Full Fact should read Prof Henshaw's commentary in this Newsletter on this blatant fallacy. He shows that 99% of cancer is caused by non-ionising agents.*

DCMS spin

- "Full Fact makes clear there is no evidence that 5G is harmful to humans."

► *DCMS should follow the mainstream scientific evidence, not fringe unscientific views.*

- "5G mobile data is transmitted over radio waves. These radio waves are non-ionising, meaning they do not carry enough energy to directly damage a person's DNA inside cells."

► *As above for Full Fact, the anonymous author should read Prof Henshaw's article to see that low-level EM exposures can damage DNA, certainly indirectly if not directly, as shown since 1994.*

(DCMS: "No evidence of a link between 5G and coronavirus" May 6 2020)



**Department for
Digital, Culture,
Media & Sport**

RFR AND DENIAL OF THE SCIENCE

Public health still denying mainstream science on ES from 1932

Alison Bell, Somerset council's public health consultant, said:

- "We're not disputing that people are having symptoms, such as ES. What we are disputing is the cause."

► *The mainstream science has known since 1932 that RFR causes ES and this has been confirmed in many scientific studies since then.*

("Wireless is a pollutant": residents take on experts over new technology" Western Gazette, March 19 2020)

The Somerset County Council meeting, including Hamish MacLeod from Mobile UK and the ASA's CAP, and Alison Bell, is available on YouTube.

("5 G Agenda. Somerset County Council Meeting. 11th March 2020" Youtube, March 12 2020, 98 min.)

BBC's unscientific theory



- "YouTube has banned all conspiracy theory videos falsely linking coronavirus symptoms to 5G networks. The Google-owned service will now delete videos violating the policy ..."

While 5G uses different radio frequencies to its predecessors, it's important to recognise that the waveband involved is still "non-ionising", meaning it lacks enough energy to break apart chemical bonds in the DNA in our cells to cause damage."

(Leo Kelion: "Coronavirus: YouTube tightens rules after David Icke 5G interview" BBC News, April 7 2020)

► *The BBC should read Prof Henshaw's commentary on this blatant fallacy (in this Newsletter), where he shows that 99% of cancer is caused by non-ionising agents.*

► *The BBC should also read: "The analyses of data from the exposed group, residing within a perimeter of 80 m of mobile base stations, showed significantly higher frequency of micronuclei when compared to the control group, residing 300 m away from the mobile base station/s." (Zothansima et al.: "Impact of radiofrequency radiation on DNA damage and antioxidants in peripheral blood lymphocytes of humans residing in the vicinity of mobile phone base stations" Electromagn Biol Med., 2017)*

Times' mistake on RFR

- "Baseless theories linking the rollout of 5G with the Covid-19 pandemic began to spread on social media in February. The theory is thought to hinge on a misunderstanding about the nature of radio waves, over which mobile data are transmitted. Radio waves belong to the electromagnetic spectrum, which includes at one end some harmful waves such as gamma rays and x-rays which can cause cancer. Mainstream scientific theory maintains that these dangerous high-frequency waves are different in nature from low-frequency waves."

► *The Times should read Prof Henshaw's commentary in this Newsletter on this blatant fallacy. He shows that 99% of cancer is caused by non-ionising agents.*

- How false rumours spread: Celebrity spreaders: Amanda Holden, Woody Harrelson shared an article on Instagram to his two million followers last Thursday that suggested 5G could be "exacerbating" the pandemic. It gleaned more than 25,850 likes.

► *5G uses RFR. RFR can weaken the immune system, so the rumours and celebrities are correct and the Times article is wrong.*

(Lucy Fisher: "Vandal attacks spurred by 5G-coronavirus conspiracy put lives at risk" Times, April 7 2020)

UK Ofcom censors facts on RFR

- "British broadcasters are being warned that they face sanctions from the media regulator [Ofcom] if they give airtime to false health advice about coronavirus, after a Sussex radio station was given a severe warning for broadcasting baseless conspiracy theories that the pandemic is linked to the rollout of 5G phone networks. Ofcom confirmed it was actively monitoring TV and radio stations ... despite international agencies finding there are no health risks associated with 5G."

► *Mainstream science has known since 1953 that RFR like 5G has health risks and can cause cancer. The WHO/IARC classifies RFR as a 2B carcinogen and the FDA & NTP found 'clear evidence' that mobiles cause cancer.*

(Jim Waterson: "UK media outlets told not to promote baseless 5G coronavirus theories" Guardian, April 2 2020)

CORONAVIRUS AND RFR

ES-UK Information Sheet on Coronavirus

See the ES-UK website under Resources for advice on Coronavirus, especially the need to maximise health and immunity by removing RFR electrosmog as far as possible.

There is no evidence that Coronavirus is caused directly by RFR, but it can be affected by RFR.

Parallels: ES/EHS and COVID19

Some observations on parallels between ES/EHS and COVID19:

- Both are dangers from an unseen toxin or disease.
- Both have long-term and global consequences for health, society and the economy.
- Both can cause people badly affected to lose their health and even their life.
- Both can cause people affected and those dependent on them to lose jobs, income, and social contact.
- Both require society and government to take action to protect everyone and especially those most vulnerable.

Coronavirus COVID19 made worse by RFR weakening immune system

Coronavirus SARS-CoV-2 does not seem to have been caused directly by 5G. However, COVID-19 may be made worse by RFR, including 5G, because it weakens the immune system and can, in some people, be a factor in high blood pressure and respiratory conditions.

(Dr Joel M. Moskowitz: "Research on the Effects of Wireless Radiation Exposure on the Immune System" March 18 2020)

Gunter Pauli
@MyBlueEconomy

Science needs to demonstrate & explain cause & effect. However science first observes correlations: phenomena that are apparently associated. Let's apply science logic. Which was the 1st city in the world blanketed in 5G? Wuhan! Which is the 1st European 5G Region? Northern Italy



USA States with 5G: COVID-19 cases 95% and deaths 126% higher

In an analysis of USA states with or without 5G, COVID-19 cases per million are 95% higher and COVID-19 deaths per million are 126% higher in states with 5G, although whether these results are due to some factor other than 5G and whether this association will persist as time goes on remains to be seen.

(Dr Magda Havas: "Is there an association between covid-19 cases/deaths and 5G in the United States?" April 22 2020)

'Study of correlation between cases of coronavirus and the presence of 5G networks'

(Bartomeu Payeras i Cifre: "Study Shows Direct Correlation between 5G Networks and "Coronavirus" Outbreaks" Radiation Dangers, April 14 2020; trans. C. Edwards, April 24 2020)

Italian Prime Minister's adviser: 5G and COVID-19 connected

Gunter Pauli, the Belgian writer and economic adviser to Prime Minister Giuseppe Conte in the Palazzo Chigi, correlated 5G and the spread of COVID-19 on Twitter: Now, enough of causation, we demand truth and a 5G moratorium immediately! (Maurizio Martucci: "Gunter Pauli, the Prime Minister Conte's adviser in Palazzo Chigi correlates 5G and Covid-19: now enough, we demand truth and a moratorium immediately!" Oasisana, March 22 2020)

Germany: poor mobile coverage

Germany had many rural parts of the country with little or no mobile coverage. In late 2018 it had worse LTE (4G) coverage than many of its European neighbours, putting it in third-to-last place in Europe.

(Timothy Jones: "Germany's 4G mobile network one of worst in Europe" DW.com, December 12 2018)

5G - BANS AND OPPOSITION

Stop 5G Appeal at 10 Downing Street

The worldwide Stop 5G Appeal with over 180,000 signatures of which over 15,000 were from the UK, was handed to the Prime Minister's staff at 10 Downing Street at 3.00pm Wednesday January 22 2020.



Glastonbury wants EHS research etc

Councillor Jon Cousins, deputy mayor and chair of Glastonbury's 5G Advisory Committee, stated: "Glastonbury has been described as "a town that punches above its weight", influencing other councils and levels of government both locally and nationally. This is something that Glastonbury Town Council is mindful of when passing significant resolutions and it is certainly true of our resolution to adopt the Precautionary Principle with regard to concerns about the safety of 5G and its roll-out."

The committee heard evidence on 5G dangers from experts Prof Tom Butler, Prof Martin Pall, and Dr Andrew Tresidder, along with Hamish MacLeod, director of Mobile UK and a director of the CAP for the ASA, and Dr Frank de Vocht an epidemiologist and a member of COMARE, PHE's 'front' committee supporting ICNIRP and the wireless industry.

Recommendations for Glastonbury Council:

- 1) Ask for a Select Committee/Inquiry into 5G.
- 2) Ask for an independent scientific study into the non-thermal effects of 5G.
- 3) Ask PHE to commission research into EHS.
- 4) Ask ICNIRP to include non-thermal effects.

(Report and Recommendations from Glastonbury Town Council's 5G Advisory Committee Executive Summary" April 2020)

Bournemouth: anger at 5G 'genocide'

Dozens of angry anti-5G campaigners have accused BCP Council's cabinet of "voting for genocide" by approving a £1.3 million trial in parts of Lansdowne, Bournemouth. Protestors claimed at the cabinet meeting that the more

intense emissions of 5G will have an impact on people's health. Lee Farmer said: "A vote to invoke the roll-out of 5G is a vote for genocide." The project was unanimously backed by cabinet members but was criticised by most of the public at the meeting and the meeting had to be paused while they left.

(Josh Wright: "Anti-5G campaigners label plans for Bournemouth as 'vote for genocide'" Daily Echo, January 16 2020)

Petition "Delay 5G in the UK until there's been an independent investigation"

<https://petition.parliament.uk/petitions/312997>

Paignton refuses 5G upgrade

Torbay's planning committee rejected a mast replacing a 13.5m pole with one 20m high for 5G at the entrance to the Beverley Holidays park at Paignton. This was because of the visual impact and perception of health effects of the 5G which the park owners warned could damage the business by putting off visitors. Councillors were told that they could consider people's perceptions and fears of 5G technology, but it would be given low weight at an appeal.

(Edward Oldfield: "Planners refuse 5G phone mast upgrade with 'perception of health effects' raised" Devon Live, January 14 2020)

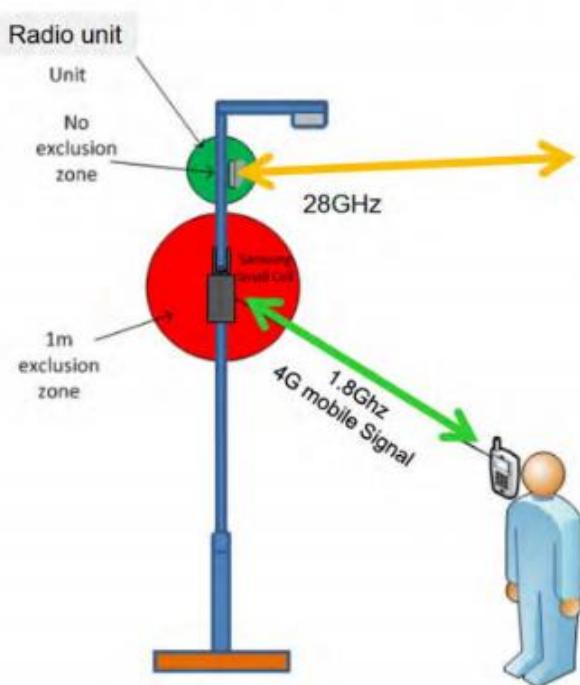
Bushey rejects 5G mast

A plan for a 20-metre-tall 5G phone mast in Little Bushey Lane, Bushey, was rejected by Hertsmere Borough Council. The site has a 12-metre-high pole for 2G, 3G and 4G. The council said: "it would fail to blend in satisfactorily with the surrounding urban environment." Hundreds of people campaigned against the 5G plan.

(James Cowen: "Proposal for 5G mast to be built in Bushey refused planning permission" Watford Observer, December 18 2019)

Arqiva: Short-term Zones for 4G/5G with Small Cells

RF safety - small cells

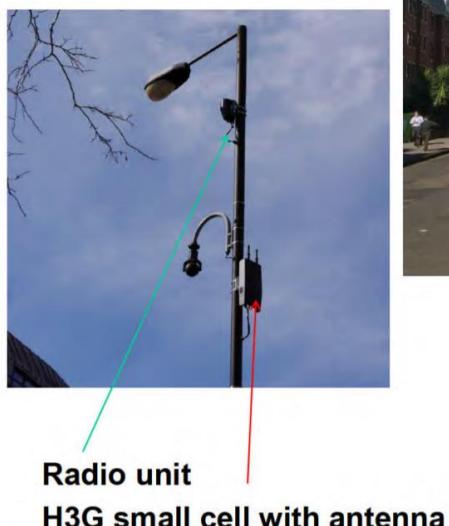


- On this example there are two "wireless elements" on the column
 - Small cells should normally be electrically switched off before carrying out any work at height
 - Radio unit are lower powered and higher frequency so in theory can be left powered, though for ease it would make sense to turn off ALL the telecoms. In this case the radio unit may still be carrying traffic so you should avoid blocking the line of sight to the next radio unit.
- The small cells are of higher power. So there is an exclusion zone of around the equipment:
 - occupational ≈1 m, in any direction
 - public ≈1.5 – 2 m horizontally, ≈1 m vertically
- When Arqiva are looking to deploy a small cell on the lamppost needs to be at least:
 - 1.5 – 2.5 m horizontally from face of building,
 - 1.5 – 3 m horizontally from a road, and 1 m vertically above
 - given a bus is 2.6m in height
 - We also consider Scaffolding and need 1 m horizontally from where the scaffolding is erected
 - Although this is normally a temporary structure and as such we would look to deploy once the work has completed and the scaffolding has been removed

The Radio Units
near the top of the lamp post operate at 28 MHz, to link the small cells below with the network.

The Small Cells
(H3G – '3' or Hutchinson '3' G - with 2 antennas, or TEF – Telfonica or O2) using a 4G signal emit 1.8 GHz to the 5G mobile phone
'hand' set [but not supposed to touch the body!].

Small cells In Situ



Arqiva's exclusion zones for Small Cells are for short-term heating-only exposures.

Arqiva's exclusion zones do not cover exclusion zones to comply with international guidelines for long-term and non-thermal exposure.

- short-term:** horizontally 1.5 – 3.0 metres from buildings and roads/buses etc.
- short-term:** vertically 3.6 metres, to allow 1 metre from buses 2.6 metres high.

The Small Cells are wired to the Radio Units higher up the lamp post to provide network access.
(Arqiva: "Overview of RF safety with Small Cells" December 2019, p.6-7, FOI)

PETS PLEAD FOR LOVE AND CARE

'An appeal and prayer to all pet owners'

by Theodore, representative of The Dogs and Cats Alliance (DACA) for pets harmed by RFR
by Janet in Australia.

Hello! My name is Theodore. I represent all the animal kingdom. We sit here today in this beautiful park – without Wifi. We have run away from our homes, leaving our owners and our human families.

We miss the pats and hugs, our interaction with children, playing ball and games.

What you see here in the park are cats with dogs, usually enemies, but come together for the cause. Who would ever think it possible? We had to put aside our differences, unite, and fight for our cause.

Our cause is the right to live our lives with our owners, but without being irradiated by mobile phones, Wifi, and 'smart' devices everywhere. Your human toys are harming us dramatically! We trusted you with our lives, but you irradiated us!

What is it you humans are looking for? Your greed – the 'more' syndrome – has a high cost. My master died from a glioma brain tumour, leaving a young wife and three children behind. I fled as the pain I endured daily was intolerable.

I pause - not a pun as in paws, ha-ha; I still have a little humour left – I pause now in prayer:



Image courtesy of The Fox Collection 61275 Yoga Park.

Dear Humans

*who are using your radiation toys,
Can you please care for the animals that you
rely on to bring you unconditional love?*

We love you, despite your faults.

*We don't care how you look,
We don't see your nationality.*

*We are your saviour in a world that has lost
much grace.*

Dear Humans,

*please use less your radiation toys,
so we can go back home to all the boys and girls
who miss us so.*

*Dear Humans,
you have created so much for yourselves,
materialistically,
but your souls are slipping slowly away.*

*Dear Humans,
go back to your slower pace.
Remember the snail who won its race.*

No need to live in the fast lane.

*If we can't go home, our lives, yours and mine,
will be lost for ever.*

*Your wi-fried
Theodore*



LEGAL ACTIONS

There is a growing groundswell of mainstream scientific opinion against the unscientific and obsolete short-term limits set by the industry cartel of the WHO, ICNIRP, PHE and similar unprotective groups.

Legal actions already underway include two against the FCC in the USA (where the judge in another mobile phone case called the FCC ‘dumb’), the Netherlands, Denmark, Norway, Australia and two in France, as well as in several other countries. At least two legal actions are starting in the UK.

Doubtless many more legal actions will follow until the ICNIRP and FCC start to follow mainstream science instead of Schwan’s short-term heating hypothesis of 1953. This has been invalidated by the weight of established scientific evidence, including thousands of robust peer-reviewed scientific studies.

Links to two leading UK legal actions are below.

Please see their websites for further information.

5G Judicial Review 2020

www.crowdjustice.com/case/5g-judicial-review-2020/

“This page is against wireless 5G, radio-frequency radiation (“RFR”) and electromagnetic fields (“EMFs”) generally due to their impact on the health of humans, animals and plants.

Many people are sensitive to RFR and EMFs and suffer illness, distress and financial loss due to inability to work. The balance of scientific evidence is now clear that RFR/EMFs are harmful to humans.

The UK government insist on using ICNIRP’s guidelines to set limits of radiation for public health. ICNIRP’s guidelines are not fit for purpose as, among other things, they only recognise harm from heating of the body and are set for short term exposure – 6 minutes in fact. Many people suffer harm without any heating of their bodies.”

Legal Action Against 5G

<https://actionagainst5g.org/>

“Michael Mansfield QC is leading our legal team challenging the UK Government over its failure to take notice of the health risks and public concern related to 5G.

One of the most venerated barristers of our time, Michael Mansfield has led legal teams in high profile cases of civil liberty and miscarriages of justice. He has represented the families of Grenfell Tower, Lockerbie, the Ballymurphy Massacre and Stephen Lawrence.

He was recently described as “the king of human rights work” by The Legal 500 and as a Leading Silk in civil liberties and human rights.”

ES STORIES

‘People who don’t suffer ES don’t understand how debilitating it can be’

*Excerpts from an account by a reader in the UK, February 2020,
one of some 800,000 people in the UK severely affected by EMF and RFR.*

I mentioned unpleasant symptoms to my GP around 2006. I explained how I have to live a very restricted life, not being able to be around mobile phones/masts, etc. without symptoms such headaches, heart rate changes, nose bleeds, nausea, skin rashes; cognitive disturbances or ‘brain fog’ and general fatigue/unable to function normally to mention just a few of the symptoms.

I remember as a child feeling nauseous or tired when a storm was brewing even before it was or wasn’t forecast. My mother said she could tell the weather by my reactions, although she felt nothing herself.

However, I first started to notice my sensitivity had become debilitating when my daughter used the microwave. When I passed it, my energy would go and I would feel nauseous and exhausted, with my legs feeling limp and

useless. I even collapsed in a heap on the floor at one time, a frightening experience, like some others.

Once my husband and I were walking along a lane. At first I felt all right but suddenly my energy draining away, and I felt nauseous and disorientated. I then felt anxious and scared and I told my husband that I didn't understand it because I had been feeling fine.

My husband questioned me: 'Do know there's a mast around the corner?' I didn't. As we rounded the corner, the feelings worsened and he had to practically carry me. When we were near the mast, he pointed it out to me. I said: 'That's not a mast, it's a tree.' He replied that it was a mast disguised as a tree. I looked closely and realised it was.

On another occasion, as my husband was driving, I suddenly felt terrible shooting pains in my head and held my head in my hands. He asked me what was wrong but as we rounded a corner, there was a mast in full view. Soon the pains lessened and disappeared.



When we changed broadband provider, my husband asked to have a wired router because of my ES. The assistant said the routers are adapted for wired or Wi-Fi. After about 10 minutes after my husband set it up, I started to feel nauseous, fatigued and unable to think clearly - an awful feeling, difficult to describe but completely debilitating.

I had to stop using my wired computer, saying to my husband that I didn't know what was wrong. I went into the garden and I started to feel better. When I came back it was only about 3 minutes before I started feeling really bad. I said I knew the computer was wired but I

had to get out. My husband then discovered that unless you go on the internet and turn off the Wi-Fi off the router, the Wi-Fi remains on. He sorted it and I was then fine.

A couple of years ago, I found that I couldn't sleep a wink when I had always been a good sleeper. It went on for several days and I mentioned to friends that I didn't know what was causing it. It was affecting all aspects of my life and mood, and even my digestion. Someone who knew of my ES asked if they had changed my street light to LED. I knew that the lights had been changed, but wasn't sure if it was LED until the person described the light. I knew immediately that it was LED. I contacted the council and asked if it could be switched off at night like the previous light. They said it was not possible, but they sent a man to see the problem in the dark and he agreed that it needed a shade on it. He said that he had received many complaints about the new LED lamps interfering with residents' sleep and fitted many shades that had helped some.

The shade was fitted within 3 days and I was able to sleep again, but my sleep has never returned completely to before the new LED lamp, because the shield does not cover the whole lamp. Thick curtains don't help because I like air from the open window and a mask is uncomfortable to wear. LED street lamps have been proven to interfere with the circadian rhythm and PHE warns of the dangers of the LED street lights to eyes, too.

Due to my ES, I often need to leave meetings early due to the symptoms from Wi-Fi and phones. This is frustrating. I attended a meeting at a hotel on 18th July, 2019. I could feel the Wi-Fi in the room from the equipment and mobiles and it was recorded on a smog-meter. I stayed as long as I could but that night I experienced a nose bleed – one my EHS symptoms – and skin rashes the next day.

When I travel by bus or public transport, I cannot go far without having to get and walk due to the symptoms that I know are caused by the Wi-Fi and other travellers' mobile phones. I cannot use the train due to the mobile phones and laptops being used constantly.

On the 18th November 2019 I was travelling on the bus to the park and ride. I felt a change in my heart rate almost as soon as I entered the bus. I looked around and the lady sitting to my left was using her mobile phone as well as the lady to my right on the seat opposite. My brain was becoming fogged, but I knew I had to stay on the bus a while longer. I was looking the other way, when the lady to the left moved her right arm and it touched my left arm and I immediately felt a sharp pain shoot up my left arm. I instinctively withdrew my arm and turned to look: she was touching her phone with the hand of that arm that touched mine.

It is a frightening feeling of not being in control of my body due to the symptoms; symptoms that fade when leaving the scene of the trigger.

My heart rate changes are well documented in my medical records and although I had tests, nothing was ever found, although I was put on beta-blockers by one doctor for the problem. They made me feel so ill that I had to

stop taking them, however. I much later realised the reason for the heart rate changes was my ES. I kept a diary for my GP and he recorded my ES on my records.

At another meeting in September, I asked the chair if all mobile phones could be turned off or put on flight mode due to my ES. She informed those present and I assumed all would oblige, but I soon experienced symptoms associated my ES. I thought – well, it can't be the mobiles because the chair asked for them to be switched off. However, within a few seconds, firstly the mobile of the person sitting to my left rang, followed by the person's mobile to my right. I felt frustrated that people can be so insensitive. However, when I glared at them, they switched them off and I listened to the remainder of the talk comfortably. People who do not suffer from ES symptoms just don't understand how debilitating it can be and most often is for many people with ES.

'I didn't believe people had it, then it happened to me'

On February 7 2020 the BBC posted a 15-minute video on three people with ES - Velma, Emma and Dean. Their accounts of becoming EHS and trying to survive in today's electrosmog were totally genuine and captivating. Congratulations to them for explaining things so clearly.

The unscientific claims by the WHO and PHE, interspersed during the interviews, were ill-judged to go alongside such a serious subject. The people involved lose their livelihoods, family and friends.

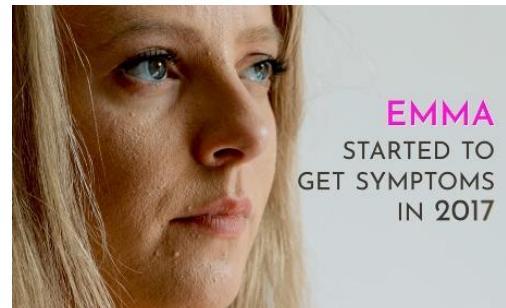
Nobody with any expertise in ES believes the invalidated hypotheses of the WHO, ICNIRP and PHE. They are based on Herman Schwan's short-term heating-only mistake of 1953 which mainstream scientists have long rejected as invalidated.

It is a shameful and unethical that the BBC still keeps to these minority beliefs in support of the wireless industry cartel. The BBC should be following mainstream science and not the false claims of the industry cartel which the accompanying report showed are not protective.

Anon.: "Electrosensitivity: 'I didn't believe people had it, then it happened to me'" BBC, February 7 2020.

Video: www.bbc.co.uk/news/av/embed/p082nij7/51281856

Webpage: www.bbc.co.uk/news/av/stories-51281856/electrosensitivity-i-didn-t-believe-people-had-it-then-it-happened-to-me?fbclid=IwAR2r5u9VtE2jxW7s8YdIlgJR7Qllctjnjp7CHz-NRQI_88jlagoN6fOPI



Electrosensitivity UK (ES-UK)

www.es-uk.info

- Aims: 1. To help people suffering from electrosensitivity.
2. To educate the public about electrosensitivity and related areas.
- for all people sensitive to EMFs and radiation -

Registered Charity No.: 1103018
Founded 2003

- BM Box ES-UK, London, WC1N 3XX
- Telephone: 0845 643 9748
- enquirers@es-uk.info



Support ES-UK

Paypal (on the website)

Cheques payable to:

Electrosensitivity UK,
should be sent to:

The Treasurer, BM Box ES-UK,
London, WC1N 3XX

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A donation of £15 per year, or
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Resources

Please see the website www.es-uk.info for the following resources.

- [Letters](#) to doctors and psychiatrists on Electrosensitivity, by Dr Andrew Tresidder
- Disability and Housing Letters and much other information and [resources](#)
- [Selected ES and EHS Studies](#) (list of articles and scientific studies with links)
- [ES Directory](#): an independent list of suppliers of equipment for ES people
- [Electromagnetic Sensitivity and Electromagnetic Hypersensitivity: A Summary](#) (2013)
- Copies of past [Newsletters](#)
- [ES-UK Leaflet](#) (see right, 2018) explains ES. Give it to anyone interested.



Newsletter

Thanks to Gordon Flavell for the use of some photographs © and to Brian Stein for printing and distribution.

Contributions for the ES-UK Newsletter on any subject related to Electrosensitivity are welcome. Please send them to the Editor:

Michael Bevington, email: editor@es-uk.info

or BM Box ES-UK, London, WC1N 3XX.

Electrosensitivity (ES) or Electromagnetic-Hypersensitivity (EHS) is a physical intolerance. It can develop from exposure to e.g. mobile and cordless phones, masts, WiFi, smart meters, CFLs, LEDs, TETRA, powerlines.

- **Common symptoms:** headaches, skin problems, insomnia, fatigue, anxiety, memory loss, cognitive confusion, muscle pains, heart palpitations, irritability, cancers. Some EHS people also react to chemicals.
- **The key treatment is avoiding radiation** (e.g. mobiles, WiFi and Smart Meters) and especially in bedrooms. Some EHS use military-style shielding or protective clothing, or live far from man-made radiation if they can.
- **Mechanisms:** e.g. cryptochromes, demyelination, Hsp70, retrovirus, ROS, subtle energy, vagal nerve, VGCC.
- **4% of the UK (2.7m) has EM sensitivity** (UK government-sponsored survey), about 1.2% (804,000) **severe sensitivity**, 0.65% restricted work, and up to 80% **subconscious sensitivity** (e.g. chronic inflammation).
- **The World Health Organization** classifies **Electrosensitivity** as an **Environmental Intolerance (IEI-EMF)** and states that it can be disabling but its Backgrounder 296 is outdated (2005). Various ICD-10 codes apply.
- **Diagnosis of ES and EHS**, by some NHS hospitals and GPs since 2013, includes: clinical history of EM sensitivity and exposure, 3d fMRI, cerebral blood perfusion scans (UCTS), DNA, H, HRV, Hsp, MT,sAA, TSH.
- **EHS is recognised legally by UK tribunals as a disability**, for adults and children (from 2012). Schools and employers must prevent ES (H&S At Work, 1974) and make adjustments for ES people (Equality Act 2010).
- **The WHO's IARC classifies EMFs**, both Radio Frequency and ELF, as **2B possible human carcinogens**. Since 2013 experts have said EMFs should be reclassified as class 1 certain human carcinogens.
- **IGNIR** gives long-term biological exposure guidelines (2108). ICNIRP's short-term heating limits are obsolete.
- **Electrosensitivity was first described in the medical literature in 1932**. It began with electrical, radio and radar workers. Since then it has spread into the general population, as wireless devices became common.
- **The different condition of Electrophobia (EPh, nocebo effect)** is psychological. It affects about 1% of EHS people. EPh's prior psychological conditioning cannot apply to EHS children, unaware adults and animals.