

Electrosensitivity Symptoms: Cancer

One of the most common symptoms of electrical sensitivity is cancer.

Some EHS people can feel EMFs and RFR from mobiles and Wi-Fi affecting body areas with cancer. The WHO's IARC classified mobile phone and Wi-Fi radiation as a 2B possible cancer agent in 2011. The FDA's NTP \$30m study confirmed this in 2018, finding 'clear evidence', its top category, of cancer. The UK's DHSC and Ofcom still follow ICNIRP's outdated unprotective short-term thermal limits, instead of protective non-thermal limits to stop RFR from mobiles and Wi-Fi causing cancer and EHS.

Mobile phones and cancer

Avoid mobiles to prevent cancers

Dose-response length of mobile phone use: nonmelanoma skin cancer and prostate cancer

The **Impact Assessment** of the 2024 study of 431,861 people from the UK Biobank aged 38-73 without prior cancers, with mobile phone users defined as participants using a mobile phone at least once per week to make or receive calls: *'the importance of limiting mobile phone use or keeping a distance from mobile phone for primary prevention of nonmelanoma skin cancer and prostate cancer.'*

Results: 17.5% men and 13.4% women developed cancer at ~10.7 years. Mobile phone use was significantly associated with higher cancer risks: men: overall (1.09), nonmelanoma skin (1.08), urinary tract (1.18), and prostate (1.19); women: overall (1.03), nonmelanoma skin (1.07), and vulva (1.74).

There was a dose-response relationship of length of mobile phone use with nonmelanoma skin cancer in men and women, and prostate cancer in men among mobile phone users.

(Zhang Y et al.: "Mobile phone use and risks of overall and 25 site-specific cancers: a prospective study from the UK Biobank Study" *Cancer Epidemiol Biomarkers Prev.* (2024) [PMID: 37870426](https://pubmed.ncbi.nlm.nih.gov/37870426/))



Ban on smartphones for children under 16?

A report by MPs in the House of Commons Education Committee



recommends the next government to consult with Ofcom on: a total ban on smartphones for under 16-year-olds; threshold for opening a social media account to 16 with controls to prevent children accessing inappropriate content; and a statutory ban on mobile phone use in schools in England. In February 2024 ministers issued guidance for headteachers that 'prohibits the use of mobile phones' throughout the school day.

Robin Walker, MP, the chair, said excessive screen and smartphone use had a 'clear negative impact' on the wellbeing of children and young people. Research shows a 52% increase in children's screen time from 2020 to 2022 and nearly 25% of children and young people using their smartphones in an addictive manner.

Smartphone Free Childhood, a group of 100,000 parents calling for handset restrictions, welcomed the report.

(Dan Milmo: "MPs urge under-16s UK smartphone ban and statutory ban in schools" *Guardian*, 25th May 2024)

Contents	page
ES-UK and ES News	2
Zoe Petraki: 'Protecting our Planet'	3
EMF light sensitivity: LEDs replaced	9

Readers' Comments	10
Electrosensitivity and the law	12
Health dangers of phone masts	14
<i>Electrosensitivity: Key Facts</i>	16

ES-UK NEWS

Electrosensitivity UK (ES-UK)

www.es-uk.info

Aims: 1. To help people suffering from Electrosensitivity (ES).
2. To educate the public about ES and related areas.

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

from whom you can obtain Standing Order,
Direct Debit, Gift Aid and Legacy
declaration forms.

Please donate £25 or more per year for
printed newsletters and general support
of the charity if you can afford it.

Trustees: Michael Bevington (chair)

Sarah Dacre, Brian Stein CBE

Dr Andrew Tresidder, Phil Watts

Medical Advisers

Dr Dietrich Klinghardt

Dr Erica Mallery-Blythe

Scientific Advisers

Dr Andrew Goldsworthy

Professor Emeritus Magda Havas

Professor Emeritus Denis Henshaw

Professor Associate Olle Johansson

Resources: www.es-uk.info: ■ [Letters to doctors and psychiatrists on Electrosensitivity](#), by Dr Andrew Tresidder ■ [Video on EHS](#)
■ [Resources: Disability, Guidelines, Housing, Planning, Public Health, Shielding](#). ■ [ES Directory \(suppliers\)](#) ■ [ES-UK Leaflet](#)
■ [ES and EHS: A Summary](#) (2013) ■ [Selected ES and EHS Studies](#) (studies with links) ■ [Newsletters](#) (including past copies)

Newsletter: electrosensitivity-uk@protonmail.com Mailing: S Dacre, Editor: M Bevington. Post: BM Box ES-UK, London, WC1N 3XX

Contact your elected representative!

Have you contacted your elected representative for their views on the UK's extraordinarily high levels of RFR? Have you asked your MP about the unprotective heating-only levels set by the UK government through ICNIRP and the WHO?

Thank you

The trustees much appreciate all donations, whether small or large. Their aim continues to be the provision of information and support for people harmed by RFR and EMFs.

Video animations:



How do RFR and EMFs affect human beings? [Link](#)



'Proof of EHS beyond all reasonable doubt'. [Link](#)



ES NEWS

'Freequencies'

This captivating short film (YouTube, 13 min., April 2024) secured second place for

Leitrim's 17-year-old Olivia Louise Curto at Ireland's Young Filmmaker of the Year (IYFTY) awards 2024 at Fresh International Film Festival.

'Freequencies' takes us into the world of Oliver, a ten-year-old boy who experiences life differently due to electromagnetic hypersensitivity (EHS). This condition makes



everyday technology a challenge: he feels the buzz of electronic devices more intensely than others. Oliver's journey sheds light on the often-overlooked effects of our technological footprint and inspires a quest for more genuine human connections.

This film is a thought-provoking exploration of the delicate balance between the digital world and our innate human needs of connection and friendship.

(16th April 2024; <https://www.youtube.com/watch?v=V1N4Egy7gEw>)

A HEALTH AND AWARENESS EVENING: 'PROTECTING OUR PLANET'

"... if you are affecting one species, you are actually affecting all of them ..."

Barrie Trower, 'The Inconvenient Reality' (Conference, Odcombe, Somerset, 13th May 2023)



A Health and Awareness Evening: 'Protecting Our Planet'



22nd April 2024, 7.00-9.30 pm, Odcombe Village Hall, Somerset
A synopsis by Zoe Petraki, member of Somerset Residents Association

The evening was organised by Peter Gane, a well-known and respected supporter of the charity Electrosensitivity UK and an electro-sensitive person himself. Following on from 'The Inconvenient Reality', a well-attended and very informative Health and Awareness Conference, in memory of Jenny Fry, in 2023, this year's evening event focussed on 'Protecting Our Planet'. It aimed to further highlight the impact on both human and environmental health from man-made Electro-Magnetic Fields (EMFs), echoing the messages from last year's conference.

The guest speakers, coming from different social and professional backgrounds, each helped us identify some challenges in realising the environmental effect of more and more intense wireless technologies, whilst they all showcased some promising ways forward to protect ourselves and the environment as individuals and collectively.

"We are bio-electric beings, we depend on the natural electromagnetic fields around us on the planet to operate, we need them ... the problem is we are now being exposed to man-made ones a quintillion times higher than the natural background level ...we can't carry on like this!"

Peter started the evening with the above statement, reflecting the words of Captain Jerry G. Flynn (retired electronic warfare specialist) that "humans, like all other things, are bio-electric beings". This raises the alarm on what a catastrophic impact the current wireless technologies have on both humans and our natural environment. It is my feeling as an electro-sensitive person that people with electro-sensitivity are not being treated fairly in respect to their physical intolerance to the environmental pollution caused by the EMFs, he added and noticed how this situation shares a lot of similarities with the Post Office scandal.

"... the top environmental problems are selfishness, greed and apathy and to deal with those we need a cultural and spiritual transformation and we scientists don't know how to do that ..."

R.C Schwartz: "No Bad Parts: Healing Trauma
& Restoring Wholeness with the Internal Family Systems Model"



Dr Andrew Tresidder

The evening welcomed Dr Andrew Tresidder, a Somerset doctor and a Trustee of the ES-UK charity, as first speaker.



Dr Andrew Tresidder, Somerset doctor, author and trustee of the charity Electrosensitivity UK

Dr Tresidder, always loyal to his attendance in events about electro-sensitivity, has a committed interest in finding out what makes people tick and how to tick better. He talked about the challenges that the medical community and society in general face in linking this type of environmental pollution caused by transmitting technologies to ill health.

Drawing upon his former lengthy practice as a GP Dr Tresidder presented three case studies of people he had treated as patients that led him to understand how environmental factors and indeed EMFs and transmitting technologies could cause ill health, whilst he also touched upon the existing challenges that doctors face in detecting these symptoms.

"Our challenge for all of us is detective work, finding out what the causes are and what we can do about it [...] Doctors are taught nothing about Environmental Medicine at the Medical School", said the doctor before mentioning the case of a mother who had brought an eight-year old boy suffering with headaches that had been going on for six weeks after the family installed a TV in the next room; the case of a child and his father that

had been experiencing fever and ill health for a few months when sleeping in a certain bed in their house and in close proximity to three Wi-Fi routers operating 24/7 on the other side of the bedroom wall; and lastly the case of a retired teacher of Science who at 60 years of age developed headaches after moving into the area and having a router on during the night in his bedroom.

This cluster of cases, explained Dr Tresidder, eventually led him to discover the environmental cause for those people's symptoms; however, detecting environmental causes as factors for ill health is where one of the challenges lie for medical practitioners. The challenge for the average doctor is that they are not being taught Environmental Medicine at the Medical School. Added to that is the challenge that when things happen gradually as opposed to drastically, people do not really tend to notice the change, or suspect the cause. Moreover, "... the biggest problem we have in society is that technology is wonderful but safety always lags technology", highlighted Dr Tresidder, pointing out that it is mere human nature that the people who are leading technological advancements in any type of industry don't particularly want to be worrying about safety too much.

Furthermore, he touched upon the thorny issue of who sets the safety levels each time and for what benefit. He carried on to yet again bust the current myth most of the regulators like to go by these days, that if it is non-thermal it cannot harm you. That is absolutely not true. There is a whole spectrum of man-made EMFs that has been known to affect humans, animals and the planet itself. There is evidence that is very rapidly accumulating, about the biological and health effects that can be monitored at levels of EMFs way below the thermal level.

The biological health effects on wild life are extensively and irrefutably portrayed by Dr Dimitris J.Panagopoulos in a 2022 book edited by himself, entitled "Electromagnetic Fields of Wireless Communications: Biological and Health

Effects". Dr Tresidder concluded his talk with a short extract from this book:

"... effects of non-thermal levels of microwave EMF exposures on insects have been known for decades. What happens if you have some insects near your router, laptop or any of your devices is that they lose the ability to forage, they can't navigate, so they starve and they die [...] man-made EMFs and especially radio-frequency EMFs should be seriously considered as a significant

driver for the dramatic decline in insects and other animals ..."

So, what is the way forward? We have a bit of a challenge ahead, was the finishing line. We have to be very aware of what we, as individuals, are doing to ourselves first before we assume it's safe. Physics tells us that everything is connected, we are all frequency and indeed if you are affecting one species you are actually affecting all of them.

Jonathan Burns

Taking the floor next was Jonathan Burns, a registered architect and EMF surveyor with extensive work experience in historic building care, natural and traditional materials based construction and benign living environments.



*Jonathan Burns,
architect and EMF surveyor*

In putting together the pieces about the ways forward and what we as individuals can do to protect life and the environment within and around us, Jonathan shared the personal story when his wife began to suffer from electromagnetic hypersensitivity symptoms a decade ago. This instigated a learning journey for both Jonathan and his wife on how EMFs can affect people and how people can protect themselves. They both started carrying out EMF surveys and have been educating others how to do the same and how to reduce man-made electromagnetic fields where they live. Jonathan

consolidated his training in the promotion of healthy living and working environments through further study. As a professional trained in creating low-energy consumption buildings he finds it very challenging to accept how local authorities and agencies have chosen to respond to the issue of environmental safety of current always-on wireless technologies and to a number of new technologies such as LED lighting, linked to retinal damage by a Spanish study, amongst others .

When it comes to the very thorny issue of safety of the EMF transmitting technologies implemented out in the public and for private use, Jonathan pointed out some worrying facts about the latest revision of ICNIRP's safety guidelines in 2020, after almost three decades without revision despite the mounting scientific evidence on the biological effects of EMFs upon human health and the environment. This self-appointed Committee removed any reference to vulnerable people, such as those with metal implants, from any special 'safety considerations'. The frequency spread covered by the guidelines was expanded to 300GHz to accommodate 5G and millimetre waves and the maximum time limits for advised limits of EMF exposure were removed. One has to wonder, why a Committee that recommends safety limits to governments does not mention the safety of the vulnerable people. Is this how they address environmental safety matters too? "... It's commercial, it's material, it's about opening up the market ..." said Jonathan Burns and he raised yet another problematic issue that has to do with the sustainability of this

whole industry. As the market demand for this new 'fast and effective' communication technology is expected to expand exponentially in the near future, Jonathan posed a very realistic question:

"Where are we going to generate all of this energy simply to transport and store data?" 5G and the fast connectivity technologies are promoted as more efficient and energy saving. But how environmentally friendly will this be with exponentially increasing and widespread use? Could we be facing another Jevons paradox, wondered Jonathan, where any gains in energy savings are reversed by the fact that people will naturally use more of it, thereby at least cancelling out the savings won? "If you are looking at savings really it's about 'killing' the baseload energy demand, if you don't achieve that then you've shot yourself in the foot essentially".

The same principle applies to heating or cooling buildings with applied retrofit insulation measures and when changing your GLS light bulb to LED lights, for example, and thus you apply more light wattage with many more luminaires than would have been used before.

But one of the biggest challenges described by Jonathan, when it comes to protecting ourselves and the environment from harmful EMFs, is the systemic failure of local authorities and relevant agencies to even accept there is a problem and to investigate it with an open mind. It is a common experience amongst people suffering with electro-sensitivity symptoms, that they are denied acknowledgment of their disability. It is also common practice for Councils and Planning Officers to rubber stamp self-certified mast applications, without an accountability process in place, and thus with no clear understanding of the fact they are failing in their responsibility towards Public Health and the safety of the environment. Then there is the case of investigations being stopped such as the ten year long \$30m US

National Toxicology Programme which found that male rats developed heart cancers when exposed to EMFs. The Federal Communications Commission (FCC) which is the body responsible for setting the regulatory framework for the telecommunications industry in the US, disregarded the findings claiming that they were not relevant to humans as the study was carried out on rats. Following that response The National Toxicology Programme declared that no further safety research would be carried out on EMFs as it was too expensive.

Note the following quotation by the World Health Organisation and the International Agency for Research on Cancer: "Every agent proven to cause cancer in humans will also produce it in animals when adequately tested"

Jonathan brought to our attention another major legal case won in 2021 by the Environmental Health Trust and the Children's Health Defence against the Federal Communications Commission in the US for failing to investigate the safety aspects of electromagnetic radiation. Again, the FCC was asked to address this failing in full but a response to the court ruling has yet to materialise. So, are we now in a free-fall world where nobody in authority in the U.S.A. is interested in investigating the health effects of EMFs in the environment? And if that is the case, where do we go from here?

[Photoprotective Effects of Blue Light Absorbing Filter against LED Light Exposure on Human Retinal Pigment Epithelial Cells In Vitro](#), January 2013: Dr. Celia Sánchez Ramos, Professor and UCM Doctor of Public Health, University College of Optics, Universidad de Complutense, Madrid. This claim can only be made per byte of data, but it is not energy saving if the number of data bites transferred per millisecond has increased exponentially with the speed and bandwidth of 5G / millimetre wave technology.



To answer this question and suggest ways forward, came the two ladies who took the floor on the second part of the evening.

Cassie Langford

A very enthusiastic Cassie Langford, founder of the National Residents Association, touched upon the bigger picture of the top down greenwash taking place in our local communities, and nationally, and how we the people can say 'no'.

Cassie questioned how green, sustainable and financially viable a number of the technologies actually are that are now being promoted as 'saving the planet'. Wind turbines that require nine solid hours of concrete pouring for each one of their bases, thousands of motoring surveillance wireless cameras that each costs about £7000 to install and maintain annually and finally, electric vehicles that require a wealth of child-labour linked minerals for their non-recyclable batteries. All these 'green' technologies linked to 'smart' cities. But how smart is it really to roll-out huge self-certified monopole masts that consume averagely as much as 70 plus households in energy, while raising the energy bills for each and every one of us, Cassie exclaimed. Are we the people okay with government investing £100m from our taxes into Direct Energy Weapons technologies? And if not what can we do?

Cassie talked about how all these questions inspired her to create the National Residents Association in an effort to educate, empower and mobilise people to take action in their local communities and indeed within their local Councils. Travelling up and down the country Cassie is setting up teams of people that are ready to take EMF readings at every area, go out door-to-door actually making people aware about

potential risks to their health and about how to organise objections to telecommunications masts with the local Councils.

One of the most moving things you can hear, testified Cassie, is how the people respond to their locals taking action and caring for their community and environment. Incredible things are happening throughout the country with people forming their local residents associations creating awareness and achieving people voices to be heard by their local officials. There are 30 to 35 branches of local residents associations at the moment and indeed a Somerset Residents Association.

"...we weren't born to be artificial intelligence, we need to bring this whole thing back to being human centred. People are pushing back and that's the way forward..."



Cassie Langford, Founder of the National Residents Association



Serena Wootton

Serena Wootton, the Green Party parliamentary candidate for Yeovil, Chard and the surrounding areas, expanded the notion of getting the community involved to achieve a safer environment for all.



Serena Wootton Green Party parliamentary candidate for Yeovil and surrounding areas

Serena carries a long experience in running community-based projects herself, she is a keen politician that has dedicated the last couple of years campaigning for the environment and also has the experience of having worked with vulnerable children for many years as an ex-teacher of Special Needs. She was very interested in participating in this evening event, to hear about and comment upon the strong parallels that one can observe between electro-sensitive people and environmental issues. Although new to the knowledge that electro-sensitivity is a medical condition, Serena Wootton could easily

relate to the principle that people's nervous systems can react differently in over stimulated environments.

"The Green Party stands for the Environment and for people", Serena summarised, whilst also stating her firm belief that small minority groups such as the electro-sensitive people can have a voice through the Party's inclusive approach to society. Picking up from the points made earlier, Serena stood by the fact that often government officials prioritise profit over environmental safety, as in the case of fossil fuels policies.

However, it is down to the people sharing their life experiences and concerns with their local councils. In going forward with this Serena holds high hopes in the people educating others and doing something towards bringing awareness to the matter of electro-smog pollution collectively. "Communities are going to save us because the government isn't".

Well-experienced in reaching out to listen to what people have to say, Serena finished her talk by giving time to the attendees of the event to speak about the changes they want to see happening in their local areas. A good and long point was made on removing Wi-Fi from all schools to protect the children from being constantly exposed to EMF radiation as well as a point about the extra expenses the electro-sensitive people have to pay in order to protect themselves in their work environment and their homes.

Thanks are due to Guy Hudson EMF surveyor, professional engineer and physicist, for his knowledgeable contribution to the presentations during the event.

Books mentioned:

"You Are a Frequency: How Personal Vibration Influences Health, Well-Being and Development", by Debbie Anne Sellwood, 2024 O-Books, ISBN-10. 1803413964
"No Bad Parts: Healing Trauma & Restoring Wholeness with the Internal Family Systems Model", by Richard C. Schwartz, 2021, Sounds True Inc., ISBN 10: 1683646681
"Electromagnetic Fields of Wireless Communications: Biological and Health Effects" Edited by Dr Dimitris J. Panagopoulos, 2022, CRC Press, ISBN 9781032061757



Peter Gane

Sub note from Peter Gane

I would like to extend my grateful thanks not only to our guest speakers but also to the following who helped make the evening possible:- Zoe- for preparing this synopsis and her support in promoting the event. Simon and Virginie- for welcoming attendees at the door. Alan- from the Green Party, for single handedly providing the refreshments.

Mick- for capturing the evening with the photography. And finally, to all those who attended the event, some travelling many miles.

Copies of this synopsis are available by request. Please note there are still a few DVD's and USB's available of 'The Inconvenient Reality' and other previous conferences.

For further information please contact Peter on 01935 423002.

EMF LIGHT SENSITIVITY: LED STREET LIGHTS REPLACED

Woman with EMF light sensitivity has LED street lights replaced

Sasha Rodoy, 70, a woman with light sensitivity has won a four-year battle with Barnet Council, north London, to have blinding LED lights in her street replaced with a dimmer alternative because they were keeping her awake. She also suffers from photophobia, an extreme sensitivity to light, as a result of eye surgery several years ago.



The council refused to take seriously her claims that the glare from the lights was 'painful' in January 2020, prompting her legal challenge, running up £50,000 of costs in the process. Barnet Council has finally agreed to replace the 4000 Kelvin bulbs in her street with 2200K bulbs, similar in hue to old-style sodium vapour lights.

Ms Rodoy recalled of the LED bulbs in January 2020: 'It was blinding. The first night they were installed, I walked out to walk my dog. It hurt my eyes as most LEDs and sunlight do - even the reflection of light on a car will blind me because of my photophobia. These lights affect the birds too: at 1am you can hear them tweeting like crazy because they think these damned lights are daylight. It's unbearable. I have to look at the ground when I go out; in the day-time I live in sunglasses and at night I use tinted glasses as well.'

The cost of replacing the bulbs in Ms Rodoy's cul-de-sac will be around £2,000. But this may rise if other residents launch their own challenges. A FOI response published by the council in 2023 confirmed it had received 368 complaints with regards to LED street lights since 2018, 301 of which pertained to brightness. Barnet Council also says 156 lamps have been fitted with shields to reduce the amount of glare projected into residents' homes.

As well as dealing with her own situation, she says she helped a neighbour with autism by having light shields attached to the LED lights on

their street; some people with autism can be sensitive to particular types of light.

She added: 'I wasn't just doing this for me. I wanted this publicised - hopefully it will continue.'



Concerns about LED safety were high-lighted in a 2017 Public Health England report on 'blue light'. This report appeared to suggest that long-term exposure to the LED wavelengths could cause a condition akin to 'permanent jet lag'. It also warned that long-term exposure to blue light 'at high levels can cause high injury'. Studies suggest LED blue light can suppress the sleep hormone melatonin. A 2022 University of Exeter paper warned LEDs were having 'substantial biological impacts', affecting animals drawn to lights such as bats. Suffolk County Council chose warmer-hued LEDs for its streetlights in 2021.

Attempted gagging order

Ms Rodoy revealed the authority unsuccessfully attempted to gag her with a non-disclosure agreement (NDA) preventing her from discussing the case for fear of setting a 'precedent'. Ms Rodoy rejected the attempt to gag her and her lawyers pressed the council to agree to change the bulbs regardless - which they have now agreed to do. Ms Rodoy said that setting a precedent is exactly what she has done.

She hopes her 'bittersweet victory' will inspire more legal challenges against bright LED bulbs. She said, 'I have opened the floodgates for everybody across the UK (to challenge their councils). This has cost me £50,000 and I am not a wealthy person.'

(Jon Brady: "Woman, 70, with light sensitivity forces council to dim bright LED streetlights after complaining that they kept her up at night" Daily Mail, 18th April 2024)

READERS' COMMENTS

Forced out of a job by an unscientific Occupational Health doctor: 'ugly face of indifference and coldness'

By a supporter of ES-UK who lives in the UK.

Thank you for your ongoing info in the recent ES-UK newsletter and elsewhere.

I left my day job in November 2023 after I could see that work weren't going to do anything else. To give them some credit they did listen to my letter explaining how I was affected and moved me (reasonable adjustment it's called) to front shop but over time it got too much there as well – all the fridges, ovens, Wi-Fi terminals for contactless payments, mobiles from customers and staff, security cameras in ceiling.

I had naively thought they would actually listen to my situation as I had been diagnosed by a Consultant Neurologist as EHS in April that year. As I was to discover corporate business and WHO directives hold sway and they told me quite clearly they would follow the advice of the Occupational Health doctor who was following the WHO view that EHS doesn't have a ICD code and doesn't exist. The face of corporation showed its ugly face of indifference and coldness.

Everything in the end revealed itself to be corrupted by the false thermal heat concept and all regulations – health and safety laws at work and Occupational Health – were speaking from the WHO narrative, either conscious of the facts or brain-washed.

Fortunately, I have savings so I've been able to have time to recover, without pressure to find money as it took so much out of me being zapped at work. My health has got on an even keel with TCM acupuncture and Qigong, changing my diet and staying away from excess Wi-Fi exposure, but the everyday problems continue, like going on a train or bus, going shopping into the city, or meeting at a friend's home or using a computer because of the electrics.

I help to educate my friends with getting hardwired but it's awful to see family and friends getting sick from RFs. Once one has connected the dots from exposure to symptoms which I did some years ago, everything else makes sense and the beginning of how to change your home and your life becomes a must do asap! Come on, friends and family, you need to too!



Fed up with feeling unwell due to Bluetooth, Wi-Fi: others do not have the right to ruin our lives

By Karl

What to do? What to do?

Recently my faithful car of 10 years gave up and so I have to go through the arduous task of finding a replacement. My stepfather kindly lent me his car. After a short period of use I noticed the tell-tale signs of electrosensitivity: the ringing and pulsating in the ears, difficulty of focusing, upper back/neck tension, weak arms and legs etc., but the worst consequence of the exposure to Bluetooth/Sat Nav emissions is the inability to concentrate and remember simple things. It strips you of your natural personality which is depressing and dark thoughts swirl around your mind.

Although you are told you can turn off these devices in some vehicles, including the car in question, it still emits high levels when supposedly turned off. I am fed up with feeling unwell due to Bluetooth, Wi-Fi, TV boxes, baby monitors, smart meters, phone masts, etc etc.. Just because the majority of people don't suffer adverse symptoms relating to the technology shouldn't give them the right to ruin our lives and turn many of us into unsociable hermits.

'Insane': COMARE not protecting us from RFR

Paul Turner from Edinburgh writes:

The body which is entrusted with protecting our health from RFR is the UK's DHSC's Committee on Medical Aspects of Radiation in the Environment (COMARE). In July 2019 COMARE confirmed it 'had not been asked to look at 5G concerns and therefore does not have a 5G strategy'. In fact, in 2020, COMARE had not reported on possible health effects from any RFR, because there had been no requests from any government departments to provide advice on this issue. Having sold the airwaves to the telecoms industry, the government has left us exposed to potential, actual damage. This could be seen as criminal negligence.

On 15th September 2017 the Scientists and Doctors Appeal for 5G Moratorium / The International EMF Alliance was issued. Over 230 scientists from more than 40 countries expressed

their 'serious concerns' regarding the ubiquitous and increasing exposure to EMF already before the additional 5G roll-out. They refer to the fact that 'numerous recent scientific publications have shown that EMF affects living organisms at well below most international and national guidelines.' Damage goes well beyond the human race, as there is growing evidence of harmful effects to both plants and animals.

So isn't it time to ask why COMARE is not conducting tests in order to protect us from RFR, leaving an overstretched NHS to pick up the pieces? And why governments are not stopping the simultaneous destruction of whole regions of the earth in search of ever more minerals and metals, for 5G and 'everything to be connected'?

Our collective behaviour in all of this looks nothing short of insane.



I felt the mobiles and Wifi on my cancers

'In the last ten years I've had two different cancers. In each case I could feel at times the mobile phone signals or Wi-Fi affecting the parts of my body related to my cancers. Why isn't this cancer-causing radiation simply banned?'

Unfair to force employees to ruin their health

'I was paying for a meal and suddenly felt nasty pains. I then realised it was the waitress' handheld wireless device. It's unfair to force employees to ruin their health through these damaging devices.'

Deximune

'I have been prescribed Deximune (ciclosporin), a low dosage of 75mg am and pm, by a dermatology specialist from our local GP surgery which has helped my skin rashes enormously. This medication perhaps may help others too.'

DWP form success

'I would like to thank you so much for your continued help and thank you from the bottom of my heart for your advice towards the form for the DWP; citizens advice also advised/supported me when filling out the actual form. DWP have

decided I have limited work capability. It is a huge weight off my mind.'

Three powerful pains in an underground room

'When visiting the underground display room in the Jorvick Exhibition at York I was hit by three powerful pains. The first upset my digestion, then the ball of my left foot caused excruciating pain, and thirdly further sharp pains in my heart. I then realised that people were using mobiles in an underground room where the mobiles would have to transmit at full power. Why not stop the use of mobiles in such a space?'



Drivers: beware the harmful masts!

'As I drove along the ring-road I suddenly felt a sharp pain in my eye. I looked around and spotted a mast which had just appeared from behind some buildings. Silly me! - I thought there weren't any harmful masts on this stretch of road and I wasn't wearing my protective metallic mesh glasses.'

ELECTROSENSITIVITY AND THE LAW

“Implications of the Radical Model of Disability for Advocacy and Clinical Care of Persons Living with Electromagnetic Hypersensitivity”

Dr Riina Bray, MD, David Fancy, PhD, 65 min. video, [Canadians for Safe Technology \(c4st.org\)](https://www.c4st.org) [Link](#).

Dr Fancy talks about the ‘medical model of disability’, with physiological explanation, which means it is not ‘in your head’, and the ‘social model of disability’, where the problem is society’s which create the barriers to access. But people with EHS are still ‘disabled’, so equality legislation is relevant.

The emerging ‘radical model of disability’ challenges ableist culture, resists disablism and promotes disability justice. Disability can be seen as entirely a social construct, not a separate impairment from the social model. The definition of ‘disability’ is controlled by other people but

there’s nothing ‘wrong’ with any human being: we’re all still human.

Imagine futures where ‘disability’ is not necessary and seen as marginalisation and oppression. Respect, equality and access are needed. Be creative and express your unique insightful awareness of our environment which is so much greater than people without our sensitivity.



French tribunal recognises EHS person as having a right to housing in situ and a right to health

The decision of the Dignes les Bains judicial court, through its Interim Order of 22nd February 2024, protects EHS Philippe Tribaudeau from expulsion. It recognises the right to housing in situ and the right to respect for health in the face of the manifestation of extreme EHS.

The Zones Blanches (AZB) Association, created by MEP Michèle Rivasi, welcomes this court decision. ‘The judge recalls that the right to property must be reconciled with the right to health. It underlines the responsibility of the State to ensure the right to housing for its citizens, and a right to respect their health. This decision is for me a recognition of EHS and the toxicity of EMFs’, declared Tribaudeau, member of the Board of Directors of AZB.



As a refugee for 9 years on a plot free of EMFs belonging to the private domain of the State, and threatened with expulsion by the ONF, Tribaudeau won a major first success in his fight against a mast near where he lives.



Archives photo Le DL /R.C.

The ONF wanted to expel Tribaudeau on the grounds of an unlawful disturbance of public order, but Tribaudeau recalled article 1 of the Environmental Charter, a text integrated into French law in 2005, which affirms ‘the right to live in a balanced environment that respects health’, EHS included. Faced with the lack of suitable rehousing proposed by the State, he invoked the right to health defined by the declaration of human rights, and the pact relating to economic, social and cultural rights as well as the convention on the rights of persons with disabilities.

The Zones Blanches Association is pleased to have supported Philippe Tribaudeau for this first court decision on the recognition and protection by the State of electrohypersensitive people.

(Communiqué de Presse, Association Zones Blanches, No.3, 6th March 2024; Une terre pour les ehs: “l’électrohypersensibilité judiciairement reconnue” March 2024)

Step by step recognition of EHS in the Netherlands

In 2023, the Dutch EHS foundation, Stichting EHS, achieved a big step towards recognition of EHS as a disability. After discussions with official bodies to explore the possibility of declaring the UN Convention on Disability applicable to people with EHS the message is clear: In the Netherlands EHS officially is a disability.

For some time, Stichting EHS has been working to get parties behind the idea that the UN Convention on Disability applies for people with EHS. After meetings with the Ministry of Health and the Dutch umbrella organisation for people with disabilities, they confirmed that the UN Convention on Disability covers people with EHS.

This was also confirmed by the Dutch Institute for Human Rights, which monitors compliance with the convention. In the Netherlands, the UN Convention on Disability has been translated into the Equal Treatment on the Grounds of Disability or Chronic Illness Act. This law stipulates that people with a disability or chronic illness should be able to participate in society like everyone else – at school, at work, on public transport and in their leisure time. Schools, workplaces, shops and companies must ensure full access for all. There is a ban on discrimination and an obligation to make an adaptation. People with disabilities can ask for an adaptation for their own situation.

The recognition by the Dutch Human Rights Institute means that people with EHS can demand application of the Equal Treatment on the Grounds of Disability or Chronic Illness Act. In other words: if you feel you cannot participate in society because of your electro-sensitivity, you can ask for adjustments by invoking this law. For example, if you suffer from radiation at work and cannot get a suitable workplace, you can ask for adjustments based on this law, and the same applies if you need to go to a hospital, but cannot

because of too much radiation. But that does not mean you will always get what you ask for. The request for an effective adjustment may be rejected if the adjustment is disproportionately burdensome. This can happen, for instance, if the adjustments cost a lot of money or effort, create an unsafe situation or are impossible to carry out. In case of discrimination, if a request for adaptation is refused, the Human Rights Institute can look into whether the refusal of the adaptation was justified. If you feel you are discriminated against as an electro-sensitive person, you can request an assessment by the Institute via a complaint form. Then you enter a formal complaints procedure that always involves the other party, such as, for instance, your employer.

If you are considering filing a complaint, because you consider it promising and your situation is well documented, Stichting EHS can direct you to an external expert who can look into the probability of success of the complaint.



After acknowledgement by the Human Rights Institute, Stichting EHS has again been in contact with the Ministry of Health, Welfare and Sport, coordinator regarding the UN Convention on Disability, which reported: 'We concur that people with EHS have the right to accessibility and inclusion just like everyone else.'

(European for Safe Connections, News, 5th March 2024)



HEALTH DANGERS OF PHONE MASTS

Pupils strike against 5G mast in Cyprus

Primary school children in the Paphos village of Konia went on strike in protest at the installation of a 5G mast. The pupils protested outside their school for two hours, holding placards with slogans such as 'We have a Right to Life', 'Radiation Damages Health', and 'No 5G near School'. Speaking at the protest, Konia Mukhtar Kyriakos Kyriakou said 'the whole community is protesting against the placement of the tower,' with 280 school students at 'immediate risk'. He said he and his village council did not know how to submit opinions on the matter during the planning process and therefore their views were not taken into account when it was erected.

With this in mind, he said he supported the strike, and added that the tower should not have been constructed because the school is 200m away.



Students boycotted class for two hours

(Image: Kiki Pericleous)

The school's parents' association Thomas Nikodemou also spoke at the protest, saying the tower 'emits radiation directly at our school'. Another parent at the protest, Marios Smilas, said he had had cancer twice and does not want to 'risk my children's lives'.

(Tom Cleaver: "Paphos primary school children strike over 5G tower" Cyprus Mail, 15th February 2024)

U.S. school shielded from mast RFR

Desert Sage High School, a tuition-free, public Waldorf-inspired school in Tucson AZ, has taken numerous steps to reduce cell tower, wireless and cell phone radiation exposure to students and staff. They currently are shielding the school from the RFR from nearby cell towers.



Safe Tech Tucson volunteers attaching metal mesh screening to the external wall of a school room during the demonstration cell tower radiation shielding in November 2023.

More and more schools are becoming aware of the impacts on students and teachers of day-long exposures to high levels of RFR from classroom Wi-Fi routers, computers, tablets, and many personal cell phones. In addition to the accumulated research on RF related health risks, including cancer, oxidative stress, reproductive and neurological harm, there are neuropsychiatric

effects that impede student learning, such as behavioural and memory problems, ADHD symptoms, anxiety and depression.

One of the first steps Desert Sage took to reduce RF radiation exposure was to remove a slew of Wi-fi boosters mounted to ceilings throughout the building. The school also has a responsible cell phone policy: students leave their phones in lockers during academic work time and other school activities.

However, an RFR assessment by Building Biology certified Electromagnetic Radiation Specialist (EMRS) Lisa Smith found that the levels of RFR coming into the school from a nearby T-Mobile cell tower, located half a block away, were much higher in cell tower-facing classrooms. The cell tower had recently been 'upgraded to 5G'. After the upgrade, her measurements show the levels of wireless microwave radiation had doubled and far exceeded science-based safety guidelines established by experts to protect against non-thermal biological impacts and long-term health risks.

Lisa Smith is now working with the local group Safe Tech Tucson to shield the classrooms from the cell tower radiation by covering the exterior walls with aluminium metal mesh screening material. In November 2023, volunteers conducted a demonstration shielding for a Maths classroom that reduced RF radiation by 95%, greatly lowering students' cell tower RFR exposure while learning at school.

Safe Tech Tucson is now raising money for the remaining shielding materials and hopes to

complete the project in March. So far, they have raised \$1,230 of the \$1,850 needed.

The Los Angeles California School District Office of Health and Safety developed a 'cautionary level' for RFR 10,000 times lower than FCC limits because 'it is believed that a more conservative level is necessary to protect children, who represent a potentially vulnerable and sensitive population.'

(Anon.: "A public high school shielding classrooms from cell tower radiation" EHT, 27th January 2024)

Strokes living near a mobile phone mast

In 2007, Marcia and Jason Haller, high school sweethearts who met in Duluth, Minnesota, bought their dream property north of Duluth to peacefully live close to nature and Marcia's family. Little did they know then that American Towers, AT&T and T-Mobile would soon build a phone mast just 900 feet from their home.

Nearly immediately after the mast was 'upgraded' in 2019, Marcia became disabled from the intense RFR levels from the mast. Since then, she has suffered 51 strokes, vision and hearing loss, headaches, sleep disruption, chronic fatigue and cognitive impairment. She experiences ongoing issues with balance, orientation and mobility. Now, backed by the legal team in Children's Health Defense's (CHD) Electromagnetic Radiation (EMR) & Wireless program, Marcia plans to sue the companies operating the tower, under the Americans with Disability Act. Marcia says that the companies must provide her with a 'reasonable accommodation' and/or 'modify their policies, practices or procedures' to comply with federal disability law.

In September 2019, Marica and Jay noticed workmen doing a 'major upgrade' on the 300-foot cell tower on the property adjacent to theirs. Marcia, then in her third year of nursing school who worked as a certified nursing assistant at a hospital, said the work lasted about 10 days. On the weekend after the workers completed the

upgrade, Marcia was at home and began feeling dizzy and as if something 'just didn't feel right'. She called Jay, telling him, 'Something's wrong in my head ... I don't know how to explain it. I just feel like crap'. The physical sensation was 'awful', Marcia said. In addition to dizziness, she had headaches and nausea. 'I couldn't pick my head up off the pillow without the room spinning and feeling very sick'.

The symptoms continued. On Monday, she went to urgent care and was diagnosed with vertigo. She returned home. A few days later, she had blind spots in her vision and tingling in her arm with 'almost a numb feeling'. Marcia called the on-call nurse centre. They told her, 'You need to come down to the emergency room. We think you're having a stroke.'

An MRI of Marcia's brain showed numerous damaged areas called lesions. She was admitted to the hospital on 10th October 2019, and diagnosed with strokes, vision loss and balance difficulties. After three days in the hospital, the strokes stopped and MRIs of her brain no longer showed lesions. Marcia returned home.

But before the end of the month, Marcia 'started feeling the same thing again' and went back to the emergency room. She was diagnosed with more brain lesions. A neurologist told Marcia the MRI scan of her brain looked like a 'starry night' because of how many white spots, or lesions, appeared. The doctors still did not know what was causing them, she said. Over the following weeks, Marcia went 'back and forth a few times' between



her home and her local hospital. After a night or two at the hospital, she would begin feeling better. But after returning home, her symptoms re-emerged and she would have to return to the hospital. 'Each time, more strokes,' she said. According to Jay, 'A week or 10 days later, there'd be seven or 10 new ones [lesions appearing in the MRI scans]. This was going on for about a month. I think we rounded up to about 51 complete strokes.' Still, her local hospital doctors could not explain why this was happening.

In early November 2019, Marcia was referred to the Mayo Clinic where doctors found her symptoms consistent with Susac syndrome, a rare autoimmune disease. She received new plasma in her blood, steroids and medication. The treatment did not work, and when Marcia returned home, she had more strokes. After a second round of treatment, Marcia had more strokes, including one that temporarily impaired her hearing, and she continued to experience extreme fatigue.

During one of Marcia's stays at the Mayo Clinic, Jay 'just woke up' with a strong sense that the mast RFR was causing Marcia's symptoms. 'Then he started doing research and that's when we started piecing things together,' Marcia explained. Based on what Jay was discovering, he and Marcia decided to try living elsewhere.

On 3rd March 2020, they and their son moved into Marcia's parents' house a mile further away from the tower. Marcia 'got a lot better', she said. The strokes stopped. But in October 2020, Marcia's parents returned so Jay, Marcia and their son moved back to their house close to the tower. In just a week, Marcia started experiencing the same symptoms again. They became more convinced that the RFR was making Marcia sick.

On 16th October 2020, they hired Frank DiCristina, a certified building biologist and certified EMR specialist, to measure the RFR. DiCristina's report showed peaks of up to 18 mW/m², 18 times higher than what the Standard of Building Biology considers the 'extreme limit'. Marcia and Jay did not want to move, so they made their property more liveable for Marcia.

In late October 2020, Jay constructed a Faraday cage — an enclosure with metal lining that blocks out all RFR. This has made a big difference. Marcia said she can feel her head relax when she's in the Faraday cage. Anywhere else in the house or yard, her head feels 'loud' and 'full ... like a motor's running'. But it's not fun having to go into a small enclosed space to feel OK; they call the Faraday cage 'the penalty box'. It's a tiny room with no power and no windows — just a 'complete black box with two beds', Marcia said. She and Jay sleep there. 'I would be nervous to sleep in my house because I don't want to get sick again,' Marcia said. Sleeping out there isn't convenient. 'There's no bathroom in the garage,' she said.



Marcia also now wears a metal-lined baseball cap at home to mitigate her symptoms. With these measures, she slowly was able to complete her nursing program and return to work.

They think the RFR may have been a factor in Jay's development of rheumatoid arthritis. Their son, Clay, had a major blood clot in his left arm. In 2022, then-16-years-old, he asked, 'Is it normal that my arm is blue and tight?' CT scans showed Clay had a blood clot from his elbow into his neck and two more clots in his lungs. An integrative medicine doctor thought that the blood clots could have been caused by RFR.



Their dog, Daisy, developed fatty tumours that limited her mobility and she had to be put down. 'Some of the deer definitely have these tumours like the dog did,' Jay said.



When they tell others about their experiences, people tend to 'just kind of brush it off' and say, 'That's not going to happen to me.' But a 2019 analysis suggested that 1.5% of the population experience severe symptoms from exposure to RF radiation, 5% have moderate symptoms and 30% have mild symptoms.

(Suzanne Burdick: "Exclusive: Woman Living Near Cell Tower Diagnosed With 51 Strokes" The Defender, 26th February 2024)

ELECTROSENSITIVITY: KEY FACTS

Electrosensitivity is the condition of being physically affected by radio frequency radiation, voltage transients ('dirty electricity', VLF), and/or power lines and ELF.

- **Radio frequency radiation (RFR)** is emitted by mobile phones, phone masts, Wifi, smart meters, Bluetooth, Fitbits, radio and TV masts etc.
- **Voltage transients** ('dirty electricity') and very low frequency can be emitted from induction cooker hobs, battery chargers, CFL and some LED lights etc.
- **Power lines** (extremely low frequency) are associated with electric and magnetic fields, like transformers, electric motors, hair dryers, shavers, washing machines.

Electrosensitivity is a spectrum condition:

- Everyone is electrosensitive since all cells in the body can react subconsciously to magnetic and electric fields.
- Some people are more consciously RF/EMF sensitive or perceptive than others.
- Some people become hyper-sensitive and are severely disabled by RF/EMF.

Electrosensitivity is also called:

- EMF Intolerance Syndrome
- Environmental Intolerance
- Microwave Sickness
- Radio Wave Sickness

Electrosensitivity covers a wide range of conscious and subconscious reactions, like other environmental allergies or sensitivities, such as to particular foods, pollens or amounts of sunshine.

- The conscious adverse symptoms of Electrosensitivity (ES), like headaches, physical weakness and muscular pains, were first recorded from 1733 by scientists researching the effects of electricity.
- More disabling Electromagnetic Hypersensitivity (EHS) was first recorded in 1746.
- In the 19th and early 20th centuries telegraph lines, electricity supplies and radio caused conscious symptoms among workers. Simultaneously, most people were affected subconsciously by the 'diseases of civilisation'.
- Since then, conscious effects, and subconscious ones like disturbed sleep, cancers, infertility and heart problems, spread more widely, with computers, mobile or cordless phones, Wifi and smart meters.

SOLUTION: removal of man-made RF/EMF exposures causing intolerance

HISTORY: SCIENCE

- 1733: ES: non-thermal adverse symptoms, EMF
- 1746: EHS: hypersensitivity specific symptoms, EMF
- 1893: ES: specific non-thermal adverse symptoms, RFR
- 1926: RFR non-thermal lethal effects on some mice
- 1930: Non-thermal effects primary, heating secondary
- 1932: EHS: hypersensitivity specific symptoms, RFR
- 1945: Military use of non-thermal RFR in warfare
- 1953: Cancer, an ES symptom, from non-thermal RFR
- 1974: RF causes calcium flux; 1981: melatonin reduced
- 1991: ES shown in provocation tests, screened subjects
- 1995: RF causes DNA breaks, which can lead to cancer
- 2000: More brain tumours on side of head near phone
- 2002: More ES symptoms near mast than further away
- 2003: Risk of cancer x 3 nearer mast than further away
- 2014: Genetic variants associated with EHS
- 2015: Cerebral blood hypoperfusion in people with EHS
- 2017: 3d fMRI scans show brain damage in EHS people
- 2018: NTP study confirms mobile phones cause cancer
- 2019: 'Bystander' RFR effect, like ionising radiation
- 2019: Subconscious human magnetoreception shown
- 2021: Scientific Consensus by 32 Experts on real EHS
- 2022: Ecological study confirms proof of EHS
- 2023-24: Health studies: EHS symptoms near 5G masts
- 2024: Mobile phones linked to prostate and skin cancer

HISTORY: REGULATORY

- 1935: 1st RFR guidelines USSR: non-thermal & thermal
- 1957: US 'conspiracy' imposing Schwan's thermal myth
- 1968: US law: public must be protected from RF/EMF
- 1974: Health & Safety at Work Act protects ES workers
- 1990s: Insurers: RFR high risk only, like cancer asbestos
- 2001: WHO/IARC classifies ELF as a 2B cancer agent
- 2001: Geneva: mast dismantled, residents compensated
- 2002: WHO/ICNIRP recognise 'sensitive' ES people
- 2006: UK employers remove RFR for ES people
- 2007: UK £15k compensation for EHS discrimination
- 2009: EU Parl.: biological, not ICNIRP heating, limits
- 2009: EU Parl.: protect EHS and grant them equality
- 2010: Equality Act protects people disabled by ES
- 2011: WHO/IARC classifies RFR as a 2B cancer agent
- 2012: NHS consultants and GPs diagnose physical ES
- 2012: Courts accept ES and award compensation/fines
- 2013: H&SC Act: local authority duty to improve health
- 2017: US city stops phone mast after cancer cluster
- 2021: US Court: FCC must assess non-thermal effects
- 2021: Court: ES person is interested party in siting mast
- 2022: US city bans phone mast after ES symptoms harm
- 2022: UK court: removal of Wifi/phones for EHS person
- 2022: US: \$187,300 for RFR injuries to Havana officials
- 2024: EMF light sensitivity: LED streetlights replaced

ELECTROSENSITIVITY: KEY FACTS

Radio Frequency Radiation (3 MHz - 300 GHz) Adverse Biological Effects and Limits NB: Specific frequencies not listed Firstenberg, Some Biological Effects of Radio Waves , 2022; Powerwatch .		$\mu\text{W}/\text{m}^2$
Cosmic Background Level, ~1,800 MHz		~ 0.0000000001
Genetic alterations - E.Coli		0.000000001
Natural Background Level, all frequencies		0.000001
Human sensitivity		~ 0.000001
Altered EEG		0.00001
Immune effects - mice		0.0001
International Scientific Limits, Bionitiative, Building Biology, EUROPAEM, IGNIR, Seletun, etc.		≥ 0.1
Adverse Biological Effects	Conditioned 'avoidance' reflex - rats	0.1
	Premature aging - pine needles; smaller growth rings - trees	0.24
	100 yards from home Wifi	4
	Disturbed sleep, abnormal blood pressure, digestive problems, weakness, pain, anxiety	20
	100 yards from a mobile phone, peak power	40
	1 mile from a mobile phone mast	100 - 1,000
	Disturbed metabolism, changes: EEG, heart liver, spleen, testes, brain: rats, rabbits	600
	Irreversible infertility - mice	1,680
	Childhood leukaemia, < 12 km from TV mast	2,000
	Impaired motor function, memory and attention; altered sex ratio (fewer boys)	3,000
	Blood-brain barrier impaired by mobile phones	4,000
	Altered calcium flux in brain tissue	6,000
	Tinnitus, buzzing and other auditory effects	20,000
	Leukaemia, skin melanoma and bladder cancer, near TV and FM mast	50,000
	Head and chest exposure from a laptop on a table	80,000
	Metal redistributed in the lungs, brain, heart, liver, kidney, muscles, spleen, bones, skin	100,000
	Head and chest exposure from a mobile phone on a table	1,500,000
	mobile phone against the brain; laptop on the lap exposure to genitals	17-20,000,000
ICNIRP: Arbitrary, unscientific, unprotective, thermal limits, averaged 6 or 30 min.		<40,000,000

ELF EMF Biological Effects and Limits (Bevington, 2013, p.48, Table 7, Link)		
Background Level (earth's static MF: 22,000-67,000 nT)	0.0001 V/m	0.0002 nT
Sandbar Sharks: behavioural threshold (Crawford et al, 2024)		
		0.2 nV/m
Human subconscious sensitivity	Aurora Disturbance (solar flare)	0.0004 nT rise/fall at 0.0013 nT
	Schumann Resonance	0.05 nT
	*Transmembrane, **retina effects (Attwell, 2003)	*0.6 $\mu\text{V}/\text{m}$, **10mV/m
		> 100 nT diastolic BP (Dimitrova,2004)
Human conscious sensitivity	Power lines (some EHS people)	~5 nT rise/fall at ~7 nT
IGNIR 2018 limit, for children, elderly and EHS (*excluding MRI etc.)		1 V/m (average)
		*100 nT
Below/*100m from 400 kV overhead power line (Swiss, 2005; RPS, 2014)		~5,000 / *0.24 V/m
		*210 nT
Childhood Leukaemia: Relative Risk x 3.8 (Feychting et al, 1993)		≥ 300 nT
ICNIRP 1998 limit, 50 Hz		5,000 V/m
		200,000 nT

ABBREVIATIONS		
ASSESSMENTS	METRICS	THERMAL
EIA environmental impact assessment	m:milli 10 ⁻³ ; μ :micro 10 ⁻⁶ ; n:nano 10 ⁻⁹ ; p:pico 10 ⁻¹²	SAR specific absorption rate (heat)
HRA health risk assessment	k: kilo 10 ³ ; M: mega 10 ⁶ ; G: giga 10 ⁹ ; T: tera 10 ¹²	W/kg Watts per kilogram (SAR heat)
CONDITIONS	NON-THERMAL	PHYSICAL AGENTS
CFS chronic fatigue syndrome	Frequencies (F):	CME coronal mass ejection (geomagnetic disturbance)
EHS electromag. hypersensitivity	ELF extremely low frequency	GEC global electrical circuit (atmospheric electricity)
EI environmental intolerance	VLF very low f., VHF very high f.	EF electric field
ES electrosensitivity	UHF ultra high f. (microwave)	MF magnetic field
FI functional impairment	Hz Hertz (one cycle per second)	EMF electromagnetic field
HS Havana (EHS) Syndrome	kHz kiloHertz, MHz megaHertz	RFR radio frequency radiation
MCS multiple chemical sensitivity	GHz gigaHertz, THz teraHertz	
ME myalgic encephalomyelitis	Magnetic fields: mG. milliGauss	PRINCIPLES
MS multiple sclerosis	μT , nT microTesla, nanoTesla	ALARA as low as reasonably achievable
MWS microwave sickness	Electric fields, transients:	HC10 harmful concentration at 10%
DEVICES	V/m Volts per metre	HFP health first principle
ATA analogue telephone adaptor	G-S Graham-Stetzer (transients)	NDP non-discrimination principle
CFL compact fluorescent light		NET no effect threshold
LED light-emitting diode	NON-THERMAL & THERMAL	NOAEL no observable adv. effect level
ONT optical network terminal	dBm decibel-milliWatts (each 3: x2)	PP precautionary principle
SM (wireless) smart meter	$\mu\text{W}/\text{m}^2$ microWatt per metre squared (power density)	

ELECTROSENSITIVITY: KEY FACTS

CONSCIOUS SPECIFIC SYMPTOMS

- Anxiety
- Asthma
- Cancer
- Confusion
- Cramp
- Depression
- Diarrhoea
- Dizziness
- Fatigue
- Hair loss
- Headache, brain pain
- Heart palpitations
- Indigestion
- Irritability
- Light sensitivity
- Memory loss
- Menstrual changes
- Muscle/nerve pains
- Nausea
- Noise sensitivity
- Nosebleeds
- Restless legs
- Sinusitis
- Skin rashes
- Sleep disturbance
- Smell sensitivity
- Thirst, Tics, Tinnitus
- Visual effects

SUBCONSCIOUS SYSTEMIC EFFECTS

- Brain wave disturbance, especially Alpha
- Cancer: bioelectrical dysregulation, DNA breaks
 - e.g. brain, breast, prostate, skin, thyroid
- Cell cycle disturbance, mitochondrial dysfunction
- Cell membrane depolarisation, ion channel effects
- Fertility reduced, changes in offspring, more females
- Heart: changes to rate, variability, cerebral perfusion
- Immune system changes: chronic inflammation
- Nervous (peripheral and central) system effects:
 - Demyelination, axonal and microglia
 - Hippocampus: enzymes, proteins
 - Hormonal: cortisol, testosterone
- Skin: mast cell degranulation, allergic sensitivity

CAUSES

- Bluetooth, TETRA, Wifi
- CFLs, LEDs, transients
- Cordless DECT phones
- Mobile phones, masts
- Powerlines, transformers
- Smart meters, Fitbits

MECHANISMS

- Cilia. Hairs. Cryptochromes
- Demyelination. DNA signalling
- Genetic variants. Glial/synapses
- Magnetite. NALCN. Pineal gland
- Radical pair mech. Retina. SCN
- Voltage-gated channels

PATHWAYS (like some Ultrasound effects)

- Antioxidant glutathione. Metabolism
- GABA. Hormones: melatonin, thyroid
- Metal implants, dental amalgam, fluoride
- Oxidative stress (like ionising radiation)
- Protein expression: ERK, Hsp70, p53 etc.
- Signalling: Ca, CaSR, NMDA, T cells, TGF

FUNCTIONAL IMPAIRMENT AND EHS SYMPTOMS

- Electrical Hypersensitivity (EHS), established since 1746, is an environmental systemic spectrum syndrome.
- EHS is caused by the person's exposure to RFR/EMF.
- EHS disables people with a range of symptoms which vary as the condition and its causes change in severity.
- Symptoms are disabling, causing functional impairment under the Health & Safety 1974 and Equality 2010 Acts.

EHS SYNDROME: CLINICAL DIAGNOSIS

- Clinical history: cause/effect from exposure/symptoms.
- The absence of symptoms when the RFR/EMF source is removed (positive reverse provocation testing).
- Multiple biomarkers, but only a few may be elevated or suppressed, depending on RF/EMF toxicity; GC-MS.
- Brain blood perfusion and 3d fMRI scans, where the potential benefits outweigh health risks of an MRI scan.

PREVALENCE IN UK 67m POPULATION

- 0.65%, 435,500 people: work restricted because of EHS
- 1.2%, 800,000 people: severe electrical hypersensitivity
- 3.6%, 2.4m people: moderate electrical sensitivity
- 100% subconsciously sensitive, 80% chronic inflammation

TREATMENT: AVOIDANCE OF RFR/EMF

- Avoid RFR: e.g. masts, mobiles, smart meters, Wifi
- Keep: 10m from mobiles in use, 100m from Wifi
- Live: 500m from masts, 600m from powerlines
- Protect sleep: e.g. military nets, shielded rooms.

NON-IONISING (RFR/EMF) and IONISING RADIATION

Both cause oxidative stress and cancer; sensitivity varies. 24 hours of mobile phone harms DNA like 1,600 X-rays. Both: primary non-thermal effects, thermal secondary. Both: hormetic (change low/high dose), no threshold. MFs engender genomic instability like other carcinogens, such as ionising radiation and chemical carcinogens.

RESEARCH INTO ES AND EHS

ES research started in 1730 at the Royal Society, London. Centres for research into ES and EHS include: ARTAC Paris, Breakspear Herts, EMC Dallas USA, DARPA Caltech USA, HUSM Lleida, CES Moscow, UC San Diego USA, Toronto WCH, JMU Virginia USA.

NATURAL RFR/EMF EFFECTS

All life in the Earth's biosphere is electrically sensitive to natural geomagnetic and global electrical circuit changes at levels far below most man-made electrosmog.

ICD-10 CODES

- ICD-10: W90.0 (RFR); W90.8 (ELF); Z58.4 (radiation).
- EHS, known since 1746, does not have an ICD-10 code.

E(H)S = Electromagnetic (Hyper)sensitivity EMF = Electromagnetic Field(s) RFR = Radio Frequency Radiation

ELECTROSENSITIVITY: KEY FACTS

SCIENTIFIC MAINSTREAM CONSENSUS NON-THERMAL & THERMAL EVIDENCE

- All scientific weight of evidence; not an arbitrary claim
- Established long-term (and short-term) effects
- Established non-thermal (and thermal) adverse effects
- All ES symptoms recognised as harm, e.g. cancer, EHS
- EMF/RFR harm to wildlife and biosphere recognised
- 32 International Independent Experts, 2021:
EHS is a 'neuropathological disorder', not psychological.
[Scientific Consensus International Report on EHS, 2021](#)

INTERNATIONAL PROTECTIVE SCIENTIFIC GUIDELINES

Bioinitiative 2012,
Building Biology (sleeping areas) 2015,
EUROPAEM 2016,
IGNIR 2018,
Seletun 2010

IMPARTIAL MAINSTREAM ORGANISATIONS USING ESTABLISHED SCIENTIFIC EVIDENCE

*These independent groups include experts on real ES
and accept the NTP and WHO/IARC cancer classifications.*

- Bioinitiative Group <https://bioinitiative.org>
EHT: Environmental Health Trust, USA <https://ehtrust.org>
EMF Scientist: International EMF Scientist Appeal [link](#)
EPA: Environmental Protection Agency, USA
ES-UK: Electrosensitivity UK <https://www.es-uk.info>
EUROPAEM: European Acad. for Environ. Medicine [link](#)
IARC: International Agency for Research on Cancer [link](#)
ICBE-EMF: International Commission on the Biological
Effects of Electromagn. Fields (ICBE-EMF) icbe-emf.org
ICEMS: Internat. Commission on EM Safety www.icems.eu
IEMFA: International EMFs Alliance <https://www.iemfa.org>
IGNIR: Internat. Guidelines on Non-I. Rad. <https://ignir.org>
NTP: National Toxicology Program, USA [link](#)
PHIRE: Physicians' Health Init Rad. & Envir. phiremedical.org

1st MYTH: UNSCIENTIFIC THERMAL-ONLY CLAIM

- Ongoing 'conspiracy' from 1957 to impose Schwan's unscientific short-term heating-only myth of 1953
- Arbitrary: no evidence 1°C rise causes e.g. cancer, EHS
- Unprotective against ES symptoms e.g. cancer, EHS
- Unprotective of wildlife and the earth's biosphere
- 'Cherry-picking' by biased industry cartel 'fronts'

2nd MYTH: INVALIDLY PRETENDING EHS IS EPH

WHO Backgrounder 296 (2005) confuses two different conditions, (a) physiological EHS, known since 1746, and (b) psychological EPH (Electrophobia, IEI-EMF), a nocebo effect known since 1903. EPH's prior conditioning cannot apply to EHS children, unaware adults and in warfare. (But ICNIRP recognises non-thermal ES adverse effects, 2002)

ARBITRARY, UNPROTECTIVE THERMAL GUIDELINES

FCC 1998, ICNIRP 2020

'FRONT', FRINGE AND SINGLE-VIEWPOINT GROUPS, UNPROVEN DENIALS, 'JUNK' SCIENCE & MYTHS, 'CONSPIRACY' & MISINFORMATION

Many are secret 'captured agencies' with no experts on EHS and ignore the NTP and WHO/IARC cancer classifications.

- DHSC: Depart. for Health & Social Care (follows ICNIRP)
- UKHSA: UK Health Security Agency (advises Ofcom/DCMS)
- COMARE: Com.on Med.Aspects of Radiat. & the Envir.
- EAHS: EMF and Health Subgroup (2022-); AGNIR (1990-2017) Pub. Health Engl. (PHE)'s Advis.Gp on NI Rad.
FCC: Federal Communications Commission, USA
GLORE: Global Coord. of Res. & Health Pol. on RF EMFs
SCHEER: Sci. Comm. on Health Env & Em Risk (Eur.Com.)
ITU: Internat. Telecommunications Union (UN agency)
WHO: World Health Organiz.(UN agency): - EMF Project
- ICNIRP: Int.Com.on Non-Ion.Rad.Prot.(WHO agency)
- WHO† is subject to Int. Atomic Energy Agency (IAEA)
- IAEA is subject to Int. Comm. on Radiol. Prot. (ICRP)
- WHO/ICNIRP recognises ES risk: to 2004, from 2018

† WHO does not hold jurisdiction over national health work.

Electric Field	Background level	International Radio Frequency Radiation Guidelines and Reference Levels (3 MHz-300GHz)					
		Non-thermal and Thermal effects			Thermal effects only		
		Long-Term and Short-Term			Not Long-Term [WHO 2003: duration needed]		
		Peak			only Short-Term (6 - 30 minutes)		
		Scientific			Averaged		
	Safe for humans	Protective for most humans			Unprotective for humans, especially sensitives		
	Safe for wildlife	Includes some wildlife			Excludes wildlife		
[Red = Thermal Metric]	Johansson et al. 1997	USSR 1935	Bioinitiative 2012	EUROPAEM,IGNIR 2016, 2018	USA Schwan 1953	USA,ICNIRP 1982, 1998	ICNIRP,WHO 2020**
V/m	~ 0.00002	6	0.03 - 0.05	≤ 0.002 - 0.2 *	194	61	≤ 123
µW/m ²	~ 0.000001	100,000	3 to 6	0.1 to 100	100,000,000	10,000,000	≤ 40,000,000
dbm	< - 90	+ 20	- 26 to - 23	≤ - 40 to - 10	+ 50	+ 40	≤ + 46
W/kg	(SAR) < 0.00002	Seletun (2010) 0.0003			1980,1984: 0.08 whole body; 1.6/2.0 head; 4.0 limbs		

* Wifi: 0.02 V/m (20 mV/m) = 0.03% ICNIRP. **Excludes Implants.

Further information: www.es-uk.info