

ES AND EHS PROVED AGAIN AND AGAIN!

New studies link exposures with ES and EHS symptoms and prove human magnetoreception.

2.0

Smart phones kill birds

More on this Indian blockbuster film inside.

2G, 3G, 4G and 5G:

'Absolute Insanity'

A world-leading expert, Prof. Martin Pall, calls the uncontrolled race by the UK and other countries to increase EM radiation "absolute insanity".

At international conferences in Sussex and London during November 2018 he explained how the scientific data is pointing to cumulative and imminent effects such as a crash in collective brain and reproductive functions over the next five to seven years.

In addition, a significant shift in the gene pool, as shown in animal studies, could mean the end of human life as we know it within another three or so generations.



IGNIR

International Guidelines on Non-Ionising Radiation

IGNIR: real Guidelines at last

People with EHS and all others now have appropriate biological guidelines or safety limits.

IGNIR covers long-term and low-level situations, unlike ICNIRP's obsolete short-term heating limits.

See inside for this exciting development.



ES-UK's new poster, released December 2018.

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Thanks

Thank you again to all those who write to their MPs, local council, government and local communities to update them on the science. Word is gradually getting through.

ES-UK Resources on website

The Resources page on the ES-UK website has been reorganised and updated with documents to help people with EHS. The topics covered include: Doctor's Letters and Diagnosis, Information, the Colour Leaflet, Research, Radiation Safety Guidelines, Help on lifestyle, Commercial resources (the ES Directory), Disability resources, Housing letter, Public Health resources and Local Authority planning and toxic substances, Accountability and Risk Assessments, Letter of concern template, and information on Devices such as CFLs, Smart Meters, Wifi and TETRA.

Legal cases and recognition

Growing numbers of ES-UK supporters are involved in legal cases before DWP and employment tribunals and under the Equality Act 2010. Since 2012 tribunals have recognised severe EHS in granting ESA and JSA. Severe EHS has also been recognised as a functional disability in a school pupil by an educational tribunal, and by a pensions provider for early retirement on health grounds. Since 2014 some NHS hospitals and NHS GP doctors have been diagnosing EHS in patients; EHS comes under various ICD-10 headings. EHS was also recognised by the European Parliament in 2009 and by the World Health Organization as a disabling Environmental Intolerance in 2005.

ES-UK telephone helpline

We are hoping to develop a new form of telephone helpline. We'll let you know when it becomes available.

ES-UK keeping in touch

If you wish to receive emails updates but have not provided your email address, please do so. If you cannot access emails, perhaps you could consider asking a friend or family member to do so on your behalf.



ES-UK poster

This has been in washrooms in motorway service stations, mainline railway stations, shopping centres and other venues during December 2018.

The 5th ES Social was held in East Sussex on Saturday, 18th August 2018

The 5th ES Social took place on Saturday, 18th August 2018, at a farm in East Sussex close to Bewl water Nature Reserve. It started on Friday night when the private camping facilities

were opened to those who had booked a ticket and several long-haul travellers had booked into local B&Bs.

The majority of the guests arrived on Saturday at 10am and enjoyed a day of social interaction getting to know new people and catching up with old friends. The weather was perfect for the 2 mile walk to the local pub which is located around the shores of the lake and up a narrow lane. The group enjoyed lunch and the varied menu. The group gelled very well together and we enjoyed the company of a young family who wanted to know more about ES. The highlight of the experience was a singalong with Rebecca. The mood was unusually optimistic and everyone left feeling much lighter and happier. ES-UK Trustee, Sarah Dacre, organises the annual Social to give many who may feel alone with the condition an opportunity to discuss their experiences with others and to meet new friends in a relaxed setting. Many have expressed the need for

friendship and a wider social network. If you would like to organise a local Social, please respond to media@es-uk.info or write to the BM Box. You will need a safe site with suitable facilities, well away from urban sprawl, with camping or other suitable accommodation. You will need to ensure that the site is pylon free, WiMax and Phone mast free and it is relatively simple to check out the site on Google to ensure freedom from any RF and ELF emissions. What we have proven in East Sussex, is that people will travel several hours to meet and socialise and discuss what has helped them to rise to the challenge of accepting what ES symptoms have done to disrupt their lives.

Donations

Thank you to all who so generously give to the charity. Please remember to keep details updated, such as Gift Aid.

Thanks for the Newsletter

"Many thanks for a highly informative Summer 2018 newsletter."

"I thought the last Newsletter was brilliant."

Correction: last issue

"Simon Cowell opens up about his battle with low-blood pressure" Sun, October 31: Actually 2017, not 2018. Thanks to an eagle-eyed reader!

READERS' COMMENTS

New HP printers irradiate 2B cancer – avoid!

Paul writes: "I bought a new Hewlett Packard Printer Envy 7130. I set it up and noticed that the wireless function was 'on'. The instructions said that if I connected a USB cable from the printer to a PC or on the printer screen menu in wireless setting clicked 'off', the wireless icon on the printer screen would go out. It did go out but my Acoustimeter showed that the wireless signal was still oscillating between >6.0 V/m and about 4.0 V/m. The signal only stopped when I unplugged the power. I returned it to Rymans where I bought it. They said I could not have my money back because the printer had been set up. I told them that I didn't find out about the wireless permanently being 'on' until I set the printer up. I was told to contact HP Customer Services for authorization to return it. HP Customer Services confirmed that the wireless emission on the printer could not be turned off and authorized me to return the printer. All of HP currently produced printers have wireless function set permanently to 'on'. You wouldn't know this unless you had an RF meter to test them. This seems immoral to me." Older stock (eg HP Deskjet 2130) is still healthy.

Tesla and awareness of objects in the dark: bioelectric reflections and echolocation?

A letter from Diana Crumpler, Victoria, Australia:

"Mention of Nikola Tesla's EHS symptoms (Summer, 2018) calls to mind that John O'Neill also documented how hyperacuity of Tesla's

senses extended so far as to be aware of objects before him in the dark by a creepy sensation in his forehead.



Something similar happened to me when EHS was at its worst and I spent 8½ years in total darkness because of concomitant light sensitivity. At times of acute overload I would occasionally on awakening from deep sleep, be able to see clearly, albeit fleetingly, my surroundings – the brick archway in front of the bed, the sideboard, my hand in front of my face – not in black and white but bathed in a golden glow; light around the silvered sideboard mirror was however especially bright.

At the time, we wondered whether I was seeing in some part of the spectrum other than visible light, or whether the phenomenon was mediated by my own bioelectricity being reflected back from solid surfaces. Given the mirror factor, we now favour the latter theory.

Interesting, and perhaps also relevant in this context, is the case of Daniel Kish, the blind boy

who could recognise objects – actually see them – through a form of echolocation: the sound of tongue clicks reflected off solid objects was processed by his brain to form an image in his mind.”

Join the Movement for a White/Green Zone

Velma writes that she would like to encourage EHS sufferers to fill out the Local Self-Build survey (even get your local Council to help you fill it out) which will place you on the self-build register. This is where we can really make progress with getting our housing need recognised. Because the results of this survey will go on a register, it will alert counties of a need for an exclusive place for EHS people - our white/green zone. It doesn't mean you will have to build your own home; it will mean that the resources and funding you need can be contemplated and hopefully delivered.

Please join this movement! From the link it says: We act in two ways: As a service to enable local planning authorities across the UK to compile their local self build and custom build registers and assess demand for custom and self-build homes. As a catalyst for change, helping create more opportunities for these types of housing through publishing regional and national statistics on demand.

By leaving your details here, you will be helping to make more serviced plots available in the areas you want to build in and to create the momentum for more people-led housing, not only in your area of interest but right across the country.

<https://www.surveygizmo.eu/s3/90077130/Local-Self-Build-Register-Individuals-Base-Period-3>

Another name for a White/Green Zone?

Does anyone have a good idea for the name of an area without man-made radiation? It used to be called a 'White Zone', but this is not ideal. What about a 'Green Zone'? Someone else suggests a 'Schumann Resonance Zone'. What do you think?

Keep away, even if your phone is 'off'!

“My employer has provided me with an area away from other employees, who may have mobile phones. My employer's wisdom was evident recently when another worker walked past my window outside the room. I could see her holding her phone, although not using it. I immediately felt the usual searing pains in the head.”

Wireless car key fobs

“It took a long time to discover the cause of my sleeplessness. It turned out that it was a wireless car key fob for a BMW 5 series. We now have to keep it on the window sill nearest to the car. When it was further inside the house its radiation spread so far it was causing me ill health.”

[Car fobs often use 315 MHz, a relatively low frequency which will penetrate buildings and people more than higher frequencies – Ed.]

“It felt horrendous”

“It felt horrendous as I walked through Gower St and Bloomsbury St. around University College London recently. It appears to be coming from the red and white metal boxes surrounding the base of each traffic light.”



Higher than expected death rate near masts

“Thank you for the leaflets you sent me. I started giving them out in my local building society when it was very quiet. The two assistants were very interested and asked whether phones and masts had anything to do with the number of mums aged around 50 they knew that had died already or had cancer at the moment. They meet and talk outside school when picking up their children. “What school is this?” I asked. They gave the name. “The one 50 metres from the BT Telecoms building with all the phone masts on the top?” I asked. “Yes” they said. “Yes,” I said, “It is a high possibility, especially if these mothers are exposed to wifi at home, work, from their own phone etc.” People are noticing the higher than expected death rate among friends.”

EHS and those who are blind or have sight loss: electrical equipment should have tactile and not wireless controls

“There is a need for all devices like electrical equipment, cookers, heaters, washing machines, etc to be manufactured with tactile controls. Electronic displays and controls accessed only by

touch screens or wireless are impossible for people like me who are blind and EHS.”

Hearing aids should not be wireless for people with EHS (and all others)

It is absurd on health grounds to provide wireless hearing aids for people with EHS. Manufacturers need to check their devices with safety guidelines like IGNIR. Hearing aids should comply with IGNIR, not ICNIRP which is only for heating effects averaged over 6 or 30 minutes.

Outlaw Wifi and electrosmog – like smoking

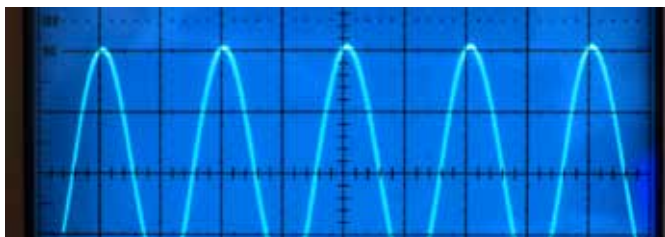
“Thank you for all your well researched articles and information on electrosensitivity. Oh for the day when Wifi and electrosmog are outlawed, as smoking in public was.”

Radar controls make roads impassable

“The trunk road is impassable by me, presumably due to the radar control. On the news every day I hear of lorries overturned, which have caused traffic delays on the main motorways and some deaths, so surely the strength of the radar should be reduced. Those lorry drivers are many hours on the roads, so the radar is far too strong for them too.”

Spanish farm for sale

Spanish farm for sale, suitable for electro-sensitives. Personal info by email from patriciamurphy at gmail.com or from professional estate agent.



Think Positively

Sandi writes: “Being ES is not easy to live with especially if you find it difficult to get help or you’re abused because you try to tell others the truth about the technology and the vulnerability of children, the sick and elderly and wildlife. We can only help those who will listen. Sometimes we feel sad because we can’t be as we want to be but, hey! - we are the ones who know the truth and learn to look after ourselves despite all. We may

still have pain and problems, but we can cope better if we are positive.”

- Think and act positively.
 - Find the right sort of protection for yourself.
 - Build up your health through wholesome food and exercise.
 - Think kindly, with affection and understanding.
 - Try not to think about the cause of your condition or have negative thoughts.
 - Relax and pray, but also push yourself to do more when you can.
 - If you are still using a mobile or WiFi, ask yourself if the convenience is worth the harm to yourself, your family, your friends and pets.
- Sandi also commends the native American poem “Spiritual Warrior”.

Some personal views on fighting cancer: Organic fruit and veg.

Paul has contributed his views for anyone interested. This is not medical advice, for which you should see a trained physician.

“Anyone with cancer may be interested the following discovery I have made: ‘salvestrols’, a supplement from organic fruit and veg created by Professors Potter and Burke when they were at De Montfort University Leicester. Their results, written up in case studies in ‘Journeys to Wellness’ by Brian Schaeffer, are of people getting cured. Brilliant read. It works with many different cancers and kills the cancer stem cells which can cause a return of cancer after conventional treatment. I have been taking it for a month along with a year of trying to only eat organic food, no dairy or sugar or cake or red meat or processed meat or food at all, just before an MRI scan in September on my prostate cancer.

The consultant was amazed. The cancer is shrinking and the PSA test result dropped by 28%. My consultant wanted all the details.”

Some notes on phytoalexins or ‘salvestrols’:

- Plants produce phytoalexins or salvestrols to fight infection from fungal spores, but not if sprayed with fungicide or they are GM.
- Salvestrols work by interacting with the enzyme CYP-1B1, inhibiting enzymes called tyrosine kinases which are over expressed in cancer cells causing their growth and spread. Salvestrols do not cause cell death in normal

cells since normal cells do not have the enzyme CYP-1B1.

- Salvestrols taste bitter, so modern fruit and vegetables are bred without salvestrols to be sweeter. Older varieties may be better.
- Salvestrols are water soluble, so vegetables boiled in water lack them.
- Many non-organic cranberry juices have salvestrols removed to reduce bitterness, as do olive oils to make them appear less cloudy.

- Sources of phytoalexins include: broccoli, cabbages, kale, sprouts, cauliflower, spinach, chard, lettuces, watercress, green beans, broad beans, garden peas, artichokes (globe), red & yellow peppers, celery, salad rocket, avocado, pumpkins, squashes, gourds, marrows, courgettes, cucumbers, melons, gherkins, holy basil, rosemary, ginger and oregano; strawberries, raspberries, grapes, plums, black and red currants, blackberries, blueberries, mulberries, cranberries, bilberries.

DR WILLIAM J. REA

Dr William J. Rea, the world's first Professor of Environmental Medicine, at Surrey University, and author of a study proving EHS in 1991

William J Rea, MD, who died on August 16 2018, was a 'visionary pioneer and clinician' in environmental illness. He was a thoracic and cardiovascular surgeon with a strong passion for the environmental aspects of health and disease. He was the founder and director of the famous Environmental Health Center (EHC-D), Dallas, Texas, USA. He wrote many medical textbooks and research papers. In 1988 Dr Rea was named to the world's first Professorial Chair of Environmental Medicine at the Robens Institute of Toxicology at the University of Surrey in Guildford, UK. He co-authored a key study confirming real physiological EHS, based on an objective screening of EHS subjects ("Electromagnetic field sensitivity" J Bioelectricity, 1991).



UK NEWS

PHIRE: international scientific meeting in London

On November 5 2018 PHIRE (Physicians' Health Initiative for Radiation and Environment) organised a high-powered international meeting under Dr Erica Mallery-Blythe, its founder, and medical adviser to ES-UK, with sponsorship from Children with Cancer and the Radiation Research Trust. As a "Non-Ionising Radiation Health Strategy Meeting", it explored ways to address the serious issues facing the UK, focusing on children's health. There were excellent presentations: Dr Dimitris Panagopoulos (Greece): Effects of Non Ionising Radiation at the level of VGCC; Prof. Martin Pall (USA): Systemic effects of Wi-fi and 5G following VGCC disruption; Dr Fiorella Belpoggi (Ramazzini

Institute, Italy): Health implications of far field RF from the Ramazzini Study; Prof. Anthony Millar (Canada): RF, the evidence on cancer and justification for a new IARC review; Prof. Denis Henshaw (UK): Extremely low frequency fields and children's health; Dr Sarah Starkey (UK): Appraisal of AGNIR Report and evidence for NIR effects; Dr Erica Mallery-Blythe (UK): Overview of Evidence, Conclusions and Paths Forward.

EMF Aware Sussex conference

On Saturday November 3 2018, EMF Aware Sussex held another outstanding conference at Sedgwick Park, Sussex. It focused on 5G, Wifi and other exposures, with presentations by Dr Dimitris Panagopoulos, Dr Anthony Miller, Dr Martin Pall, Dr Erica Mallery-Blythe and Cal Washington, with introductions by Stuart Deeks

and Debbie Fry. It was an excellent day with some of the leading world experts and, not surprisingly, a sell-out. Congratulations to the organisers, especially Stef, and the speakers.

People responsible for cancer, or overwhelmed by a toxic environment?

Matt Hancock MP, the health and social care secretary, has triggered a row after urging people to take greater responsibility for their own health to tackle the rising toll of illness from diseases such as cancer and obesity. Simon Capewell of Liverpool University said the minister was right to emphasise the need for effective prevention of epidemics such as obesity, diabetes and dementia, but added: "We must recognise the huge power of our lived environment. They have just been overwhelmed by a toxic environment."

(Denis Campbell: "People must take responsibility for own health, says Matt Hancock" Guardian, November 5 2018)

Tinnitus death

Daniel Derricutt, 28, an IT programmer, killed himself in November 2017 at his home in Crew, Cheshire. He had developed tinnitus which kept him awake for nights on end after he used a pair of Bose headphones to listen to music, an inquest heard. (Richard Spillett: "IT Programmer Killed Himself After Developing Tinnitus" Daily Mail, April 27 2018)

Detained after headaches from mast

From an interview on the Richie Allen show with Susanne Small, detained against her will in a psychiatric unit in Farnham, Surrey: "Susanne alleges that she was sectioned after she spoke to her doctor about a new mobile phone mast that had been erected near her home. Susanne told her doctor that she began to feel unwell around about the time that the mast was erected. She also presented her doctor with evidence that radiation from mobile phone masts is harmful and that 5G is going to be devastating to our health. Susanne says that she believes that her doctor recommended that she undergo a psychiatric evaluation and was then taken to the hospital against her will."

(Richie Allen: "UK Woman Detained At Mental Health Facility For Claiming 5G & WiFi Radiation Is Harmful To Health!" YouTube, September 18 2018)

'Fake News' in the Mail on Sunday

An extraordinarily article claimed that "high-quality studies have shown there is no evidence this low-

level [electromagnetic] radiation is in any way harmful to health". This is clearly wrong. The vast majority of scientists now accept that low-level EM exposure can be harmful. Many thousands of peer-reviewed studies since the 1950s have confirmed this established fact. The article also reported that a recent Cancer Research UK poll found that three in ten people agree with Noel Edmonds that 'electrosmog' emitted from wi-fi, mobile phones and other electrical devices can harm health. Clearly the Mail on Sunday needs to educate the other 70% that Noel Edmonds is correct, and what the World Health Organization's IARC says, that electrosmog can cause cancers, is the real truth, not "fake" news.

(Jo McFarlane: "How fake medical news is SERIOUSLY damaging our health: From vaccines and heart pills to cancer drugs and diets...", Mail on Sunday, November 25 2018)



Reducing smart phone time

South Hampstead High School has asked its pupils and their parents to sign a contract to reduce smartphone use at home, including a phone-free weekend or a digital holiday. The "Family Phone Pledge", endorsed by Victoria Bingham the head teacher, was drawn up by sixth-form pupils alarmed by their dependence on smartphones. Students and their parents should not use their phones within an hour of sleep and they should be charged outside the bedroom. (R Bennet: "South Hampstead High School asks parents to sign pledge curbing phone use at home" The Times, November 30 2018)

Other allergies:

(A) Allergy death: coroner calls for stronger labelling rules

The coroner at an inquest into the death of Natasha Ednan-Laperouse, who collapsed on a flight on July 17 2016 after eating a baguette with sesame seeds to which she was allergic, has called on the government to examine labelling rules; Pret a Manger signs were inadequate.

(Jamies Johnson, Mike Wright: "Coroner calls for food label reform as video shows girl's final moments before fatal allergic reaction to Pret a Manger baguette" Daily Telegraph, September 28 2018)

(B) Allergy death 'easily avoided': pair jailed

Two takeaway bosses were found guilty of unlawfully killing Megan Lee by reason of gross negligence. She died from an asthma attack after ordering food online and entering her prawn and nut allergies, but was sent food with peanut protein. The bosses were jailed for three and two years after the judge told them that the tragedy "could so easily have been avoided".

(Gabriella Swerling: "Takeaway pair jailed over allergies death" Times, November 8 2018)

2B cancer 'smart' meters expensive and pointless:

(1) Get rid of your 'smart' meter - boss

Mike O'Brien is fed up with his "smart" meter. "I had an early version. After a while I barely looked at it, didn't use it. We got rid of it." In 2008 Mike O'Brien was Minister of State for Energy at the newly-created, Ed Miliband-led Department of Energy and Climate Change (DECC), which launched Britain's smart meter revolution - the biggest and most expensive in the world. It is an IT project which will not meet either its 2020 deadline or its £11bn budget. (Harry de Quetteville: "How the smart meter roll out became such an expensive failure its own minister has thrown his out" Daily Telegraph, July 28 2018)

(2) Smart meter security failings - GCHQ

Jeremy Fleming, head of GCHQ, said 5G mobile services risk making "us more vulnerable to terrorists, hostile states and serious criminals", especially through China's dominance of 5G technology. (T Stubbington: "GCHQ fears Chinese spies will hijack superfast 5G mobile services" Sunday Times, August 11 2018)

(3) Smart meters are not "free" - ASA

Adverts for the Government's smart meter roll out have been wrongly claiming the meters are "free", according to the Advertising Standards Authority.

(Katie Morley: "Adverts for the Government's smart meter roll out banned from claiming the devices are 'free'" Daily Telegraph, October 26 2018)



EM training

Have you had EM energy awareness training yet? You need it for working in RF environments.



Wireless tech: time to think again?

From an article by Dr Annelie Fitzgerald, now a university lecturer in France:

"I had been feeling under the weather for some time when my health suddenly nose-dived: violent headaches, a burning face, dizziness, brain fog, palpitations, and utter exhaustion. This was September 2008, and the abrupt deterioration coincided with the installation of wi-fi and cordless landline phones in the Paris university building where I worked. After some digging online I found that many of my symptoms were shared by others. In an environment with little wireless connectivity, my symptoms would disappear. Thankfully my experience is not (yet) typical of the general population, though I've met, talked and emailed with plenty of others—including other Oxford alumni—who have suffered similar symptoms and worse. ...

As our increasingly RFR-dependent economy appears to be founded on a false scientific paradigm (i.e., anthropogenic RFR is harmless unless it causes body tissue to heat up), it will likely prove unsustainable in the long term. In parallel with developing a low-carbon economy, we should be aiming for a sustainable, low-RFR economy."

("Wireless tech: time to think again?" Oxford Today, April 28 2018)

Petition

"Investigate the health impact of mobile technology on children and young people"

<https://petition.parliament.uk/petitions/219642>

DANGEROUS RADIATION MASTS

Dorset: 2B cancer beach Wifi

Wifi networks have been installed at Weymouth and at Charmouth Beach, funded through the Dorset Coastal Connections portfolio, which aims to irradiate 18 resorts. It is supported by groups like Dorset Wildlife Trust and the Environment Agency. WiFi is also available on the beach, promenade and seafront gardens at Lyme Regis, funded by the Town Council. ("Free Wi-Fi installed on Lyme Regis seafront" Lyme Online, March 28 2018; "Free Public WiFi on Weymouth Seafront" Dorset Coast Forum, June 14 2018; Jennifer Mulcahey: "Charmouth beach gets free public WiFi" Bridport News, October 19 2018)

Dorset: beach Wifi "heart breaking, very unfair and unnecessary"

An ES-UK supporter writes:
"I have chronic illness and severe ES. I am very upset to learn that Wifi covers a large area of my local beach. This means it will be impossible for me, with my severe sensitivity, to visit there again. This is heart breaking when it's a very special place to me and feels very unfair and unnecessary."

Mast in Black Mountains

The Home Office and telecoms network EE want to build a 17.5 metre mobile phone mast just above Capel-y-ffin, next to a track to the Black Mountains, with their extraordinary views across Wales and England. The novelist Ian McEwan is among the 60 people who have objected to the proposal. The views of Erica Mary Griffiths, who was born in the monastery

in the 1930s and runs a pony trekking centre in the area, accord with those of a growing army of people who, like the refugees who once came to Capel-y-ffin, are fleeing EM radiation. "Electromagnetic refugees" seek the best places in the world to live away from microwave radiation, which makes them ill. (Jamie Doward: "Writers' wilderness haven split over Brecon Beacons phone mast plan" Observer, September 15 2018)

National Parks want 2B irradiation for all

UK mobile industry trade body Mobile UK and National Parks England have announced a new agreement to assist the deployment of mobile network infrastructure from July 1 2018. ("Mobile UK, National Parks England sign deal to boost network coverage" Telecompaper, June 21 2018)

[Under the Environment Act 1995, national parks in England and Wales have as their first aim: "Conserve and enhance the natural beauty, wildlife and cultural heritage". – Ed.]

Church of England partnership for 2B irradiation

The Church of England is planning to add mobile phone masts to its country spires in partnership with Shared Access, a Dublin-based business controlled by Goldman Sachs. The Anglican church signed an accord with the Department for Digital, Culture, Media and Sport in 2017. "It looked like they were trying to help the community but really it has been about monetising the steeple," said Kye Prigg, head of

networks at Vodafone UK. Shared Access is behind a scheme to build floodlights at smaller football grounds which are then also used as telecoms towers. (Nic Fildes: "Church eyes Goldman to answer rural broadband prayers" Financial Times, June 15 2018)



Mast threatens school: "a huge health risk"

Parents have withdrawn their children from Dartington primary school near Totnes, Devon. The school, with 300 pupils, reopened a few months ago, but parents recently staged a one-day boycott over the siting of a new mobile phone mast 50 yards from the classrooms. Parents say radiation levels are 40 % above the safe level in the playground and entrance area. And they insist the 33-foot Vodafone mast be removed. Chloe de Sousa, who has two children at the school, said that the mast was also only yards from Bidwell Brook special school and a college: "We want the mast taken down. We want it moved to another site that is not near housing or a school." Governors oppose Vodafone's mast being set so close to the school. County councillor Jacqui Hodgson said: "It presents a huge health risk." (Camilla Tominey: "Unluckiest school in Britain: Boycott amid fears of DANGEROUS radiation levels" Sunday Express, July 8 2018)

All UK schools to regularly monitor nearby base station emissions

"Schools should regularly monitor the emissions of base stations situated inside or close to school grounds." This is from the official NHS website (accessed December 2018), last reviewed 01/04/2016, under: "Risks: Mobile phone safety"

Boris Johnson (2004): 'all new masts to be subject to full planning procedures'

Boris Johnson, MP, as editor of The Spectator, wrote in 2004: "But the reality is that I do not have advanced knowledge of electromagnetic waves. As long as there is reasonable doubt - and the Government itself has said that the precautionary

principle should be applied - then I cannot in all conscience insist that people's fears are groundless. That is why it is infamous that, under the present rules, local residents have hardly any say in where these masts are sited." (Boris Johnson, Daily Telegraph, September 30 2004)

BBC1 TV Holby City Inaccuracies; Israeli TV ES child

Holby City: failure to follow the science on real EHS

On September 11 2018, BBC1 Holby City briefly featured 'Dwayne', made electrosensitive by a phone mast, who suffered headaches and nosebleeds. He was called delusional and later diagnosed with hereditary haemorrhagic telangiectasia, or Osler-Weber-Rendu syndrome, a rare 1 in 5,000 condition which leads to abnormal blood vessel formation and nosebleeds. The Holby doctors did not explain why this condition should cause the headaches or the other specific EHS symptoms established since the 1930s as caused by EM exposure. The story should have used other conditions which can actually cause ES, such as multiple sclerosis.

BBC's 'ignorant and cruel', "Holby City did quite a good take on ES a few years ago. It is a shame they have now done the opposite. It is shameful to mock this condition. ES/EHS is a physiological illness that can cause psychological effects but it is in no way a mental illness. We are having the correct response to a powerful toxin. (Facebook UK electrosensitives group)



[Presumably the BBC policy also excludes 'outright deniers' of scientifically established conditions like EHS. - Ed.]

BBC's 'blatant propaganda' "There's a big issue with the safety of 5G at the moment and the BBC placed this propaganda in one of their most popular shows; it was so blatant!" "Holby City' scriptwriters are apparently now part of the UK Government Propaganda Machine."

(Paul Russell, Ian Rowland Crane, Stop 5G UK, Facebook, September 19 2018)

BBC: 'no need to include outright deniers'

The new BBC editorial policy on climate change: "To achieve impartiality you do not need to include outright deniers of climate change in BBC coverage, in the same way you would not have someone denying that Manchester United won 2-0 last Saturday." (Ben Webster: "BBC freezes out climate sceptics" Times, September 8 2018)

EHS character on Israeli youth TV

A new Israel cable youth TV series on "HOT VOD YOUNG", named "Eilat", has an EHS character. The character is named Carny Shahar and is being acted by Mica Zur. She is presented as the only child in Israel that is sick with a rare disease that causes her to be insulated from any kind of radiation and electricity. She lives with her family in a remote farm in the Eilat mountains. She is presented as the only child in Israel "left behind" without a smartphone.

("EHS Character on Israeli TV Series for kids and youth" NoRad4U, August 13 2018)

5G HARM

5G in Bristol: residents ask: “Are we safe?”

A recent government study in the US has showed "clear evidence" of a link between exposure to mobile phone radiation and cancer. A petition signed by more than 200 scientists and doctors warns 5G will "massively increase" the population's exposure to this kind of radiation. As 5G is being tested in Bristol, its citizens are among the first in the world to be exposed to these new high levels of radiation. Leading to one important question: “Are we safe?”

(Joseph Smith: “Questions raised over 5G links to cancer as mobile network is tested in Bristol” Bristol Live, July 24 2018)

UK government wants 2B carcinogen irradiation for majority of population

“We want the majority of the population to have 5G coverage by 2027. Mobile coverage: 87% of UK landmass has a 4G signal from at least one operator (compared to 78% in 2017).”

(“Future Telecoms Infrastructure Review” Department for Digital, Culture, Media & Sport, July 2018)

5G trials from late 2018, using 3.4 GHz

The EE 5G trial at Montgomery Square in Canary Wharf was a first “live” one. EE will switch on 10 more trial sites in east London in October, with a handful of households and businesses given prototype 5G devices to help put the new network to the test. Vodafone will begin trials in seven cities – Birmingham, Bristol, Cardiff, Glasgow, Liverpool, London and Manchester – before the end of 2018. It also wants to bring 5G to Cornwall and the Lake District. Vodafone conducted the first test of 5G spectrum across an existing live network in April 2018, a week after Ofcom's spectrum auction. It was the first time 3.4GHz 5G had been used in the UK. EE and Vodafone will start live 5G sites in 2019, with O2 and Three to follow in 2020. The first 5G phone will appear in early 2019. (Steve McCaskill : “Vodafone targets cities and rural areas for 2019 5G launch” Tech Radar, September 19 2018; Phil Wilkinson-Jones: “EE's live trial in Canary Wharf is the UK's latest 5G ‘first’” Cable, October 5 2018)

5G trial at Canary Wharf; no 5G phones yet

Canary Wharf was selected for the 5G trial because over 150,000 people pass through the area a day. If a 4G cell tower can accommodate 100,000 devices then expect a million on 5G. The

other advantage of Canary Wharf is that the estate is privately-owned. There's no need to ask various people or councils for permission to conduct tests like this. The 5G signal is 3.4 GHz, slightly higher than Wi-Fi's 2.4 GHz. In the future much higher frequencies will be used. 5G uses "beamforming" to track a device, allowing more phones to connect simultaneously. 5G hardware is physically larger than existing 4G tech, requiring stronger masts. No 5G phones are available yet.

(Ian Morris: “EE launches the first 5G network trial in Canary Wharf - and it's capable of AMAZING speeds” Mirror, October 5 2018)



5G tests: effects on cows

It was reported that five Dutch dairy farmers in a small village, Stitswerd, Groningen, Netherlands, of just over 100 people, witnessed a mystery on Saturday January 28 2017. Several hundreds of cows from the five dairy farmers simultaneously started running riot without a clear cause. The cows bumped into each other and the fences of their cowshed. One of the farmers said that their behaviour really looked like agony, not frustration - a life or death situation. Even more shocking is that the farmers all have experienced these panic attacks from their cows several times before, for the last few months. However, these events only occurred around Stitswerd. It was speculated that a raptor bird might have caused the panic attack, but this can't be true since it happened at 5 dairy farms simultaneously. A veterinarian could not find an explanation. An earthquake could have scared the cows, but none of the farmers felt anything themselves. The most logical conclusion is the panic attacks are from 5G Wifi testing in the north of Groningen, where Stitswerd is located. Groningen is the first flat land region for 5G tests. (“The Netherlands: Testing Of 5G Wi-Fi Troubles Cows. Should We Be Concerned Too?” Towards Better Health, May 9 2017, from: letsraiseawareness.org, February 16 2017)

5G in the Hague? Starlings fall dead, dogs sick

More than a hundred starlings fell dead from trees in the Huijgenspark in The Hague. The Dutch Food and Consumer Product Safety Authority (NVWA) had the dead birds examined at Wageningen Bioveterinary Research. Sharon Lexmond of the bird shelter De Wulp said "Our veterinarian has looked at five specimens and saw two slight internal bleeding, but probably caused by the fall. For the rest there was actually little unusual on the inside. The animals are not emaciated, do not seem ill. They just fall dead from the tree." (Germa Graveland: "Starlings fall from trees: Mystery around dead birds" De Telegraaf, October 26 2018)

"According to hikers who put their dog on the spot, their animals also became ill afterwards. Dogs had to vomit and had problems with the stool. That is why the police temporarily blocked the site." (Skeptics)

"About a week ago at The Hague, many birds died spontaneously, falling dead in a park. You likely haven't heard a lot about this because it seems keeping it quiet was the plan all along. However, when about 150 more suddenly died - bringing the death toll to 297 - some started to take notice. And if you look around that park you might see what is on the corner of the roof across the street from where they died: a new 5G mast, where they were doing a test, in connection with the Dutch railway station, to see how large the range was and whether it would harm equipment on and around the station."

(Erin Elizabeth: "Hundreds of birds dead during 5G experiment in The Hague, The Netherlands" Healthnut news, November 5 2018)

5G and insects and plants

5G could be particularly harmful to insects. 5G radiation will penetrate at least 1 mm; this will affect many insects proportionately much more than larger animals. It could also be devastating for many plants, which also have many key tissues and systems within 1 mm of the surface.

Complaint to Mayor of London

Submitted by a Londoner, October 17 2018:

"Dear Mayor of London, Concerning your involvement with and promotion of 5G: Please be aware that under the Law you have an obligation to practice FULL DISCLOSURE of risks so as to ensure INFORMED CONSENT to them. Please be aware that you personally, your office, the Assembly and the Labour Party are all guilty of

negligence in the conduct of your profession as public servants. You ought to be aware and have the office research capability to be aware that overwhelming evidence exists that RF Microwave radiation from cell phone masts, TETRA installations, WI-Fi, smart meters and now from the proposed 5G deployments - all generate reproductive system degradation. The proofs for this have been thoroughly set out by medical and scientific experts It is your duty, dear Mr Mayor, to be informed. To practice deliberate ignorance is unlawful and, in this case, plainly criminal since we are contemplating monumental harms to woman, to fetuses, babies, toddlers, infants, teenagers and sensitive people."



5G: Great risk for Health

"5G: Great risk for EU, U.S. and International Health! Compelling Evidence for Eight Distinct Types of Great Harm Caused by Electromagnetic Field (EMF) Exposures and the Mechanism that Causes Them" Written and Compiled by Martin L. Pall, PhD Professor Emeritus of Biochemistry and Basic Medical Sciences (May 2018, 90 pages).

5G "a massive health experiment"

According to Dr Joel Moskowitz, a public health professor at the University of California, Berkeley: "The deployment of 5G constitutes a massive experiment on the health of all species". Since the skin contains capillaries and nerve endings, millimetre microwave bio-effects may be transmitted through molecular mechanisms by the skin or through the nervous system. They may affect the eyes, the testes, the skin, the peripheral nervous system, and sweat glands. Millimeter waves can also make some pathogens resistant to antibiotics." The International Society of Doctors for the Environment, its subsidiaries in 27 countries and more than 200 doctors and scientists are all calling to stop the 5G roll out.

(Natalie Rahhal: "The roll out of 5G wireless service is 'a massive health experiment,' public health expert warns as cell companies install 800,000 towers across the US" Daily Mail, May 30 2018)

5G will require 10-100 times power consumption by phone masts

In 2017, according to Vodafone's figures, base stations took almost 60% of total mobile network power consumption. The average annual energy consumption of a 3G base station is around 4.5 MWh, compared with 1 MWh (= 1,000 kilowatt hours) which can supply about 2,000 homes for an hour (Ofgem, 2006). Therefore base stations require about 0.4 kW per square kilometer of covered area. With 1,000 times increase of data capacity expected, 5G could seriously threaten carbon usage, since many more masts will be needed. Prof. Will Stewart, of King's College London, said of the UK in 2017: "The crucial thing is you need to be shorter range to deliver the extra capacity, that means more base stations, at least 10 times more, maybe 100 times. There are between 30,000 and 40,000 masts now."

To download each Gigabyte of data over the internet takes about 2 kWh (= a 2,000 Watt hair dryer for one hour). The equivalent power usage for streaming high definition TV or movies over the internet at 2 kWh/GByte is 6,000 W/user (or 1,400 W/user for standard definition or 14,000 W/user for 4K high definition). According to Sandvine's Global Internet Report of 2016, entertainment streaming (video and music) accounts for 71% of all peak download traffic in

North America for fixed access network, and 40% for mobile access. Half of the fixed access streaming traffic was one company—Netflix. Only 29% of downstream traffic was internet proper (web browsing, email, cloud backups, file downloads and uploads, etc.). In other words, Netflix requires more bandwidth than all of the internet proper. For video streaming, cellular access requires over double the energy consumption compared with fixed cable access.

(Sarah Knapton: "400,000 extra phone masts needed to bring 5g network to rural Britain" Daily Telegraph, March 30 2017; Idelfonso Tafur Monroy: "Achieving a 90% reduction in power consumption for 5G" Bluespace, July 12 2017; L Desjardin: "Video killed the Energy Star: Why 5G must use less power" EDN Network, Feb. 20 2018)



Petitions: "Launch an independent inquiry into the 5g Health & Safety risks"

<https://petition.parliament.uk/petitions/217854>

"We want the Health & safety executive to report on the health dangers of 5G transmissions"

John Timbrell, on Change.org

TETRA DANGERS

TETRA stays to 2022 while 4G and ESN tested

The original plan was to switch off Airwave, the trunked-terrestrial radio (TETRA) network, between 2019 and 2020. Telent was awarded a £10.3m contract from the Home Office to test the Emergency Services Network (ESN), operating on the commercial 4G network or ESN. This will extend the Airwave network until the end of 2022 or beyond.

(Ryan Darrand: "The United Kingdom's nationwide TETRA network Airwave will continue to operate beyond 2020" HIS Markit, August 14 2018; Sam Fenwick: "Telent wins ESN coverage testing contract" LandMobile, November 7 2018)

TETRA still being deployed

A new TETRA / Airwaves mast behind the Edinburgh St Leonard's police station (2018).



TETRA: some health effects to 2011

In the late 1990's Blair's government contracted with O2 and Airwave for an emergency services wireless network, costing over £14 billion by 2008. When a Tetra mast was switched on in Dursley in Gloucestershire people had migraines, sleeplessness, nosebleeds and were 'shocked awake' up to 15 times a night. At a school in Littlehampton, Sussex, 11 children had to be sent home on the

day that a nearby Tetra mast went live. The children suffered dizziness and, like the residents of Dursley, severe headaches and nosebleeds. (Interestingly, the local community did not know the mast had been switched on, so the children's reactions could not have been psychosomatic.) At Drumcarrow Hill in Fife a Tetra transmitter has been in operation since the late 1990s. Only about 200 people live around the mast, but there have been at least seven recent cases of cancer and five cases of motor neuron disease (MND) diagnosed in the area over the past five years. (Normally, no more than two people to every 100,000 is diagnosed with MND per year.)

In November 2003 Airwave activated a Tetra mast a quarter mile from the centre of the village of Tayinloan (pop. 550), on the Kintyre peninsula. By the middle of December 2003 there were 5 deaths in the village, including a couple in their late 40's, the wife dying of a brain haemorrhage, and the husband of a heart attack. Even 3 miles from a Tetra mast is certainly not a sufficient distance for undisturbed sleep. On the UK mainland, 90% of the population probably live within 2 miles of 2 or 3 Tetra Masts. There is also an impact near the line between two Tetra masts.

(“A Brief Guide to TETRA masts (in the UK) and their impact” Healing Orchids, 2011)



Police TETRA in 2002: ‘no one responsible’

In October 2002, Steve Pierce, Chair of Devon and Cornwall Police Federation, spoke to Dr. Mirielle Levy, the Home Office Health and Safety Officer in charge of TETRA. Levy remarked that, “Nothing will stop TETRA and if the Officers don’t like it, they can resign...” An officer asked her who would be responsible if he contracted leukaemia. “No one is,” she replied.

Professor Challis, of MTHR, dismissed identical and rare cancers in two officers as chance and said: “Sadly people die of cancer every day”.

(Jay Griffiths: “TETRA” Ecologist, October 2004)

LEGAL ACTIONS

£1m legal case for brain tumour

Neil Whitfield, 60, a salesman, developed an acoustic neuroma tumour due to heavy phone use for his job in the late 1990s. He is suing Nokia for “significant” compensation which could hit £1million, in a case that could cost mobile phone firms a fortune.

He was left deaf in one ear after surgery in 2001 to remove a growth the size of a golf ball. He also suffers with balance problems. Neil said: “I have no doubt my tumour was caused by mobile phones. I spent almost five years glued to my phone hours at a time until I was diagnosed. I could feel the heat coming off it. I know this is going to be a real David and Goliath battle. It might take a while before it’s settled but I won’t give up. This is for the future of my children and kids everywhere.” Neil is the first Brit to sue a mobile phone company on these grounds and the

case – six years in the making – could trigger hundreds of similar claims.

Solicitor Katrina Pope, of London Corporate Legal, in Mayfair, expects to make a “strong claim” by the end of 2018. She said: “A win in the High Court could set a legal precedent for other cases which we are aware of and that are watching our progress. It is ultimately about justice for many people who have, akin to Neil, been victims of what some experts describe as the ‘smoking gun of the 21st century’. Neil, from Wigan, Gtr Manchester, said: “Companies should at least put warnings on packaging so people can make informed choices.”

Neil had to give up his job as a construction material salesman because he refused to carry on using mobiles. His claim centres around years of lost income and reduced retirement payments after a £20,000-a-year drop in pay to become a college lecturer. Katrina added: “It is quite

possible that a claim for life-changing damages such as Neil's could achieve a compensation award in the region of £1million."

The law firm has commissioned experts to carry out radiation tests on Nokia phones used by Neil, including the 5510. Katrina said: "The evidence is being collated."

Stefano Bertone, an Italian lawyer whose landmark case for Roberto Romeo ruled a link between tumours and mobile phones, said Neil's battle would be watched by the world. Romeo used the same type of mobile as Neil.

The surgeon who removed Neil's tumour at Manchester's Royal Infirmary, Professor Shakeel Saeed, said of the case: "At a personal level one cannot rule out the risk based on the current evidence." Cancer Research moved to quell panic, claiming there is no conclusive evidence that mobiles cause problems.

(Grace Macaskill: "Brit dad sues Nokia for up to £1million claiming using his mobile phone caused his brain tumour" *Mirror*, May 13 2018)



Claims for EHS, and against local authorities?

There are increasing numbers of people with electromagnetic hyper-sensitivity (EHS).

Should risk managers be worried? How such a market would develop is unclear. There could be claims from employees with EHS who are expected to work around electromagnetic fields.

Furthermore, claims against local authorities for failure to factor in the risk of EHS symptoms being triggered might be considered. *Dryden v Johnson Matthey* recently highlighted the willingness of the Supreme Court to broaden what constitutes an actionable personal injury.

Should medical evidence confirm that exposure to EMFs can result in a physiological change, it may be concluded that an actionable personal injury exists. Against whom an individual with EHS may have a claim against, and whether that claim could be successful, remains to be seen.

(David Wynn (Clyde & Co.): "Emerging risks: does electromagnetic hypersensitivity present a current or future claims risk?" *Commercial Risk Online*, September 27 2018)

France: Award for EHS damage

A man diagnosed with electrosensitivity was found to be a victim of a work accident due to his intolerance to EM waves, by the Yvelines Social Security Affairs Court (Tass). The customer service technician from a telecommunications company was the victim of a malaise on November 6 2013 at his workplace.

According to his lawyer, François Lafforgue, he had been diagnosed as electrosensitive since 2011 but had been kept in the same position despite the recommendations of the occupational health authorities, who had twice requested his transfer to a "position with little exposure to electromagnetic waves". In its decision of 27 September 2018, the Tass held that "the existence of an exclusive foreign cause of this accident is not reported" and that it could be attributed to work. It therefore ordered the Caisse primaire d'assurance maladie to pay € 1,600 to the plaintiff, as well as € 2,000 in legal costs.

This is "a first French judicial decision that opens a breach for other electrosensitive victims", said M. Lafforgue, also lawyer for Priartem.

("Yvelines: a man recognized as a victim of a work accident due to his electrosensitivity" *Europe1.fr*, October 10 2018; trans. *Towards Better Health*, October 13 2018; "Electrosensibilité : un homme reconnu victime d'accident du travail pour la première fois" *Le Monde*, October 10 2018)



Canadian EHS lawsuit against government

Canadian citizens have filed a class action lawsuit in the Superior Court of the Province of Quebec (Case No. 500-06-000760-153). The suit holds liable the government entities and corporations responsible for the proliferation of EMF and RFR technologies. It is based on the threshold guidelines for sensitive populations such as EHS.

(Anna Hunt: "Citizens of Quebec file Class Action Suit against EMF and RFR Producers" *Waking Times*, July 26 2018)

Australia: 5G Class Action planned

A public meeting was held on August 4 2018 at Mullumbimby, Queensland about a possible class action. Barrister Ray Broomhall and scientists and doctors were involved.

(D. Leszczynski: "Something potentially BIG is brewing down-under for the 5G - A class action lawsuit" *BRH*, July 30 2018)

IGNIR

INTERNATIONAL GUIDELINES FOR NON-IONISING RADIATION



International Guidelines on Non-Ionising Radiation

Dr Andrew Tresidder, chair of the new IGNIR team, explains the IGNIR biological guidelines first published in September 2018.

IGNIR exists to publicise EUROPAEM EMF Guidelines 2016, and to provide information on ways to achieve these by testing.

Electromagnetic radiation, both natural and manmade, affects biological systems – that is, all life forms. Manmade radiation is now in places of a nature and severity (up to 10^{18} times background natural radiation) that there are serious adverse effects on life forms. This occurs at exposure to levels far below those that cause thermal effects. Scientists such as Martin Pall, the Ramazzini Institute, the National Toxicology Programme amongst many others have shown this.

Much of the world has adopted safety guidelines such as ICNIRP's 'thermal only limits' that permit high strength exposures – possibly because this was convenient for military use, and legislated restriction would have been inconvenient. Such safety guidelines are flawed because of the following:

1. Biological systems respond to stimuli in non-linear response ways to dose – and can be exquisitely sensitive to low level stimuli
2. Safety always lags technological advance, often by many years
3. Non-thermal does NOT mean non-harmful – biological effects happen due to signal, as well as power, effects
4. Denial is the primary mechanism used by many people to ignore inconvenient truths

- whether industry, legislators, or end-users ('it couldn't possibly be harmful, they would let me use it if it was...')

5. Denial and society group-think has allowed the ignoring of a large amount of validated scientific research, and the use of anchoring and confirmation bias by governments, private bodies, and vested interests
6. History tells us that many harms are first ignored, then denied, then minimized (often blaming the messenger), then grudgingly acknowledged, then panicked over – all the time with vested interests often calling the tune (tobacco, safety belts in cars, tyre tread limits etc.)

EUROPAEM set guidelines for EMF exposure in 2016 – these respect biological systems.

IGNIR has adopted these, as ICNIRP guidelines only covered thermal effects and damage. IGNIR has adopted these, and thanks to Michael Bevington has produced a set of guidelines and tables. Such recommended levels aim to provide healthy living and working areas for people, including those who are sensitive, by substantially reducing exposure to EM fields, which act as an environmental toxin. Engineers are good at adopting clear guidance. IGNIR offers clear guidance to encourage engineers to innovate and develop solutions.

See www.ignir.org for details.

IGNIR GUIDELINES

IGNIR has 3 levels of guidelines, Day (D), Night (N) and Sensitive (S), covering three frequency ranges. See www.ignir.org for details.

Electromagnetic (EM) hygiene and safety involves minimising exposure levels to an environmental toxin. This guidance is based on the international EUROPAEM EMF Guidelines 2016. Although at present there are no assured safe levels of man-made EM exposure, and studies continue to show harm to living systems at very small exposure values, this guidance aims to help achieve substantial reduction in EM exposure.

| Frequency range | Metric | Type of reading | D Day | N Night | S * Sensitive * |
|-------------------------------------|-------------------|-----------------|-------|---------|-----------------|
| Radio Frequency 30 MHz – 300 GHz | V/m | average | 0.06 | 0.02 | 0.006 to <0.001 |
| | µW/m ² | | 10 | 1 | 0.1 |
| | V/m | maximum | 0.2 | 0.06 | 0.02 to <0.002 |
| | µW/m ² | | 100 | 10 | 1 |

| Frequency range | Metric | Type of reading | D Day | N Night | S* Sensitive* |
|-----------------|--------|-----------------|-------|---------|---------------|
| **VLF | V/m | average | 0.1 | 0.03 | 0.01 |
| 3 kHz – 300 kHz | nT | average | 1 | 1 | 0.3 |
| | nT | maximum | 10 | 10 | 3 |

| Frequency range | Metric | Type of reading | D Day | N Night | S* Sensitive* |
|------------------------|--------|-----------------|-------|---------|---------------|
| ELF 15 Hz – 3000 Hz | V/m | average | 10 | 3 | 1 |
| | nT | average | 300 | 100 | 30 |
| | nT | maximum | 1000 | 300 | 100 |

* Sensitive:

- (a) Sensitive groups include children, the elderly, fetuses, pregnant women, the ill and people with EHS.
- (b) Electrohypersensitive (EHS) people can have mild, moderate or severe sensitivity.
- (c) People with body metal work.

** If no meter is available, VLF measurements should not be included at present.

RF: Radio Frequency: 30 MHz – 300 GHz

includes Wifi, digital radio and TV, DAB+, cordless (DECT) and mobile phones, TETRA, FM radio, microwave ovens, wireless smart appliances, and 5G.

VLF: Very Low Frequency: 3 kHz -30 MHz

includes “dirty power/electricity” on mains power supply cables, powerline communication, compact fluorescent lamps (CFL), induction hobs and VLF radio,

ELF: Extremely Low Frequency: 1 Hz – 2 kHz

includes mains electricity, power cables, and some home power appliances.

(These guidelines are not inclusive of all EMF-emitting devices, such as DC fields, metal detectors, body scanners, MRI scanners, pacemakers, and lasers. As with ionising radiation, for medical investigations the benefits may outweigh possible harm.)

FILM, VIDEOS, BOOKS

FILM

2.0 - India's most expensive film: Vengeance on smartphone users for killing birds

In '2.0', India's most expensive film and the second-highest box-office earner at launch on November 29 2018, the ornithologist Pakshi Rajan (Akshay Kumar) takes vengeance on smartphone users who killed the birds. Look carefully for the smartphones. It's a family-rated science-fiction action film.

(Rajat Gai: "[Good that Rajinikanth's 2.0 talks of birds and cellphones but we need more studies: Experts](#)" (Down to Earth, November 29 2018)

Raja Sen, "[2.0 movie review: Rajinikanth is smarter than a smartphone, the film isn't](#)" (Hindustan Times, November 30 2018)

Teaser: <https://www.youtube.com/watch?v=owPuQjlnzO8>

Indian phone operators worried about 'mass paranoia' and 'defamation of mobile towers'

The Indian mobile-phone operators, Cellular Operators Association of India (COAI), filed a complaint claiming the film was "falsely depicting mobile phones and mobile towers as harmful to living creatures and the environment including birds and human beings" and claiming that it depicts "mobile phones and mobile towers in defamatory manner".

It claims that this "will create unfounded fear and mass paranoia" and that the storyline is "defamatory to COAI and its members" and "endangers public order".

(Pankaj Doval: "2.0 days before release, Chitti fights telcos" The Times of India, November 28 2018)



VIDEOS

Excellent video introduction to ES

Dana Ashlie: "[Information you cannot afford to miss; Billion\\$ were spent to ensure you do](#)"

(October 28 2018, 75 min). www.youtube.com/watch?v=F9bdU_uw2Dc

Dana explains how she discovered that her symptoms were the result of electrosensitivity and then investigates the science, politics and practical prevention.

Must-watch video on the extinction of insects and humans by 3G, 4G, and 5G

<https://www.youtube.com/watch?v=aHhUch5GgtY>

(Michael Chapman Pincher: "Murder by Emoji - The Digital Killing Fields - The Insect Inspector Report" YouTube, October 15 2018, 13 minutes)

The growing threats facing insect and human life are explained with simple but clear graphics.

Video on EHS symptoms used for warfare from 1953 onwards

Aaron and Melissa Dykes: "The Still Unsolved Mystery of the Eugene Signal" (Truthstream Media, October 1 2018, 32 minutes)

This describes how EHS symptoms caused by microwave warfare were used against the US embassy in Moscow from 1953, by the Woodpecker Signal, against the women of Greenham Common, and against people in Eugene, Oregon, USA. The Eugene Register-Guard (*March 26 1978: "Mystery Signal Discovered in Eugene Area"*, and *March 29 1978: "FCC Backs Off from Naming Signal Source"*) and the Oregon Journal (*March 28 1978: "Mystery Radio Signal Causing Concern in Oregon"*) described the specific EHS symptoms caused by the signal to people like Walter Deposkey. The source was later identified as a US Navy wireless base at Dixon, California. It sent out a 4.75 MHz signal with 1,100 Hz pulses at 500,000 Watts. During the cover-up governments and the military were developing their own weapons to produce EHS symptoms, such as the secret Pandora Project.

(Terence Newton: "5G Network uses same EMF waves as Pentagon Crowd Control System" Waking Times, October 5 2018)

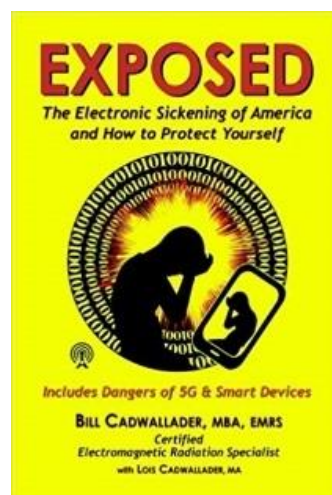
BOOKS

J G Flynn: “Hidden Dangers” (344-pages) on how industry captured governments and how, together, they are responsible for what is the disaster of the 21st century. 10 chapters: EHS; the U.S Military-Industrial-Complex; the News Media; EMR and Safety Code 6; Cell Phones; Cell Phone Towers; Wi-Fi; Powerline Frequency EMFs; Smart Meters, and National Security. (JGF Publishing, 5181 Gainsberg Road, Bowser B.C. VORIGO. ISBN: 978-1-7753945-0-1)

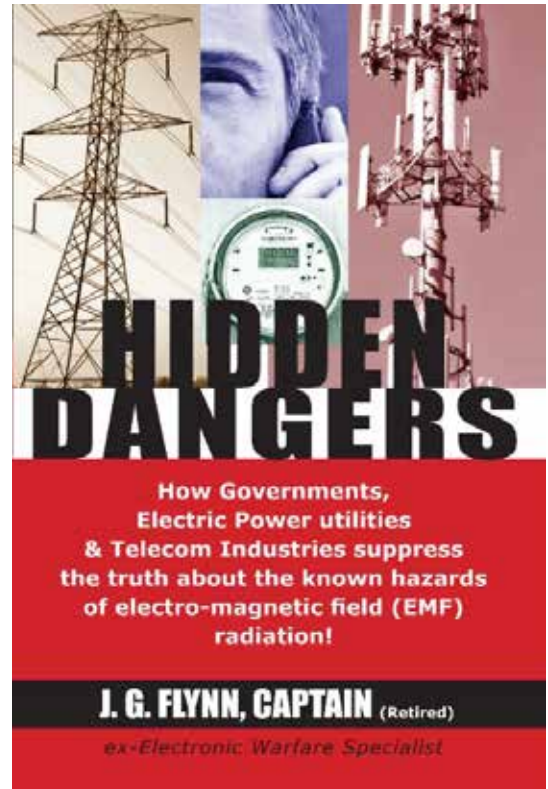
New chapter by Assoc. Prof. Olle Johansson
Olle Johansson: “To understand adverse health effects of artificial electromagnetic fields... ..is “rocket science” needed or just common sense?” in: Ingrid Fredriksson (ed.) “Essays on Consciousness: Towards a New Paradigm” Balboa Press, 2018, ISBN: 9781982208110) 38 pages.

“Exposed: The Electronic Sickening of America”

Bill Cadwallader, a retired US Marines Corps officer, aerospace and IT consultant and now a certified EMF specialist, has written a handbook for the US: “Exposed: The Electronic Sickening of America and How to Protect Yourself - Includes Dangers of 5G & Smart Devices” (ISBN: 978-1732365001; 2018, Stop Dirty Electricity). He became involved in this area through his personal experience:



“When a co-worker was diagnosed with brain cancer, Bill was shocked. He recalled that he always saw his co-worker on his cell phone, before meetings and after meetings, in the parking lot, walking down the hall. The brain tumor was located at the exact place where the man held his cell phone. The man later died, in spite of massive medical treatment, leaving a wife, who had become a widow, and seven fatherless children. Bill realized that the way we use our cell phones and other electronic devices may produce



harmful side effects. After another acquaintance developed a tumor in his abdomen, right where he held his tablet computer every night while reading in bed, Bill knew he had to do something.”

Terry Wong: “EMF Sensitivities: How To Lower EMF Exposure in 3 Easy Steps” (Kindle, 2017, Mirrorscope)



Tenzin Dawa: “Alzheimer's The Number One Killer: Prevention and Reversal of Cognitive Decline” (CreateSpace, 162 pages, 2018)

There are 5 million Americans with Alzheimer’s disease. 99% of 75 million Americans don’t know that they are positive for the allele ApoE4 which is carried by two-thirds of Alzheimer’s patients. Alzheimer’s was a rare disease before the beginning of the modern consumer society and introduction of processed and fast foods, and all these conveniences of transportation and combustion engines and turbines, and, most of all, communication by pulsing microwaves used in mobile phone and TETRA communications. *[Dementia and Alzheimer’s is now the leading cause of death for over 80s in the UK.*

MICROWAVE WEAPONS ATTACKS

US Diplomats hit by Microwave Weapons: symptoms like EHS

Beatrice Golomb, professor of medicine at University of California San Diego, said the symptoms afflicting American and Canadian diplomats in Cuba and China strongly match known effects of pulsed RF/microwave radiation (Neur Comput, 2018). Golomb said her research also draws attention to a larger population of people who are affected by similar health problems: "I looked at what's known about pulsed RF/MW in relation to diplomats' experiences. Everything fits. The specifics of the varied sounds that the diplomats reported hearing during the apparent inciting episodes, such as chirping, ringing and buzzing, cohere in detail with known properties of so-called 'microwave hearing,' also known as the Frey effect. And the symptoms that emerged fit, including the dominance of sleep problems, headaches and cognitive issues, as well as the distinctive prominence of auditory symptoms. Even objective findings reported on brain imaging fit with what has been reported for persons affected by RF/MW radiation."

Golomb compared rates of described symptoms among diplomats with a published 2012 study of symptoms reported by people affected by EM radiation in Japan. Generally the cited symptoms — headache, cognitive problems, sleep issues, irritability, nervousness or anxiety, dizziness and tinnitus (ringing in the ears) — occurred at strikingly similar rates. She also noted that previous brain imaging research in persons affected by RF/EMR "showed evidence of traumatic brain injury, paralleling reports in diplomats."

Dr David O. Carpenter, director of the Institute for Health and the Environment at the University of Albany, New York, said that reported symptoms characterize the syndrome of EHS, in which unusual exposure to radiofrequency radiation can trigger symptoms in vulnerable persons that may be permanent and disabling: "We have seen this before when the Soviets irradiated the U.S. Embassy in Moscow in the days of the Cold War." Golomb, said 93 out of 100 studies confirmed that low-level RF produces oxidative stress, a mechanism involved with RF/EMR injury. She

said oxidative injury has been linked to the symptoms and conditions reported in diplomats. She compared the situation to persons with peanut allergies: Most people do not experience any adverse effect from peanut exposure, but for a vulnerable subgroup, exposure produces negative, even life-threatening, consequences. (Scott LaFee: "Researcher Links Diplomats' Mystery Illness to Radiofrequency/Microwave Radiation" health.ucsd.edu, August 29 2018; William J. Broad: "Microwave Weapons Are Prime Suspect in Ills of U.S. Embassy Workers" The New York Times, September 1 2018; CNN: "[Microwaves suspected in attacks on US diplomats in Cuba and China](#)" (September 2 2018, 3 min)



Guangzhou microwave attack: "sonic" signal from microwaves

"James Lin, an engineering professor at the University of Illinois in Chicago, thought that the effects might have come from microwaves. He produced a "sonic" signal from microwaves in the lab and found that at the threshold level for perception the microwave pulses caused a pressure inside the head interpreted as sound. The use of microwaves as a potential weapon has a precedent in the Cold War, when American officials discovered that the US embassy in Moscow was being bombarded with them." ("Mystery noises and illnesses evoke terrors of Cold War" Times of London, June 15 2018)

Microwave attack: 'Brain Network Disorder'

NBC News reported US physicians identified a "Brain Network Disorder" with structural changes.

Catherine Werner, 31, was jolted awake one night in her Guangzhou apartment in China by a pulsing, humming sound. It seemed to be coming from a specific direction. But at the same moment, she also noticed intense pressure in her head. The sounds and sensations returned, night after night, for months. When Werner's health began declining in late 2017 — vomiting, headaches,

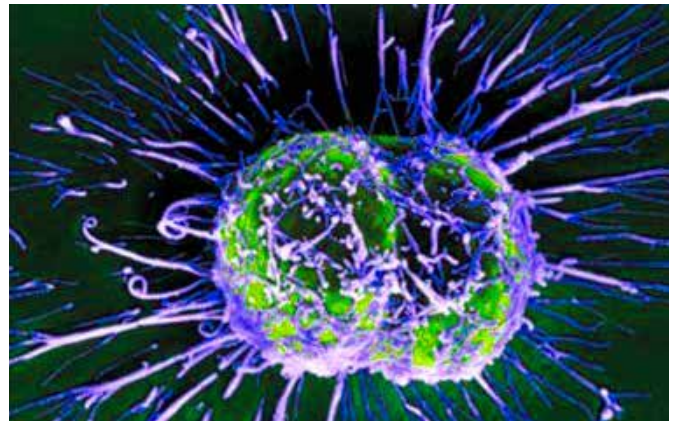
loss of balance — she brushed it off at first, thinking China’s polluted air and water were getting to her. It wasn’t until months later — after her mother, Laura Hughes, grew alarmed after seeing her daughter’s health decline during regular video chats, flew in from the U.S. and then got sick, too — that Werner was medevaced from China back to the States. Doctors at the University of Pennsylvania found vision and balance disorders, and an “organic brain injury”, diagnoses similar to those of 26 diplomats in Cuba who started hearing strange sounds and falling ill in late 2016.

Laura, an Air Force veteran, arranged new air and water filters. When mother and daughter noticed signs of home intrusions — lights turned on that had been left off, household items out of place — they adopted two dogs. Catherine was bumping into furniture, struggling to recall basic words and vomiting for no reason. Her mother also heard the sounds, — high-pitched and low-pitched — along with pulsing pressure that felt like a wave washing through her body. Soon she, too, developed headaches, nausea and problems concentrating. Three months after arriving in China, Laura flew home, feeling she “physically could not tolerate staying any longer.” She pleaded with Catherine to return.

In late March 2018, the consulate’s officers saw how Catherine’s health had deteriorated and referred her to doctors. In Guangzhou she was given tests called the HABIT (Havana Acquired Brain Injury Tool, developed for the 26 diplomatic staff in Cuba with hearing and memory loss and headaches). The exam includes memory and balance tests. Those who fail are sent for more advanced testing at the Penn Center for Brain Injury and Repair at the University of Pennsylvania. Werner’s HABIT tests showed multiple deficits similar to the Cuba cohort.

So a week later, she was sent to Penn. Among her diagnoses was “neuropsychological dysfunction due to organic brain injury.” Records show she tested below the fifth percentile on a developmental eye movement exam. A psychological evaluation found problems with motor functioning and visual perception. An MRI found “scattered supratentorial white matter lesions,” mild but “more than typical for age.” At Penn, a computerized map of Werner’s brain was constructed using an experimental MRI technique

called diffusion tensor imaging, and experts compared her brain map to a composite created from the cohort of patients affected in Cuba.



Catherine’s findings were similar enough to the Cuba patients that Secretary of State Mike Pompeo issued a warning in Congress. The State Department paid for her mother to be tested, too, by the same physician. Since returning from China, Laura had been trying to hide her newfound struggle with recalling words from her husband, but he noticed. She grew particularly alarmed when she discovered she couldn’t remember the names of the family pets. An MRI of Laura’s brain in June 2018 found chronic small vessel ischemic changes, “more than expected for age” and “scattered foci of abnormal signal in white matter,” and an evaluation listed ‘acquired brain injury’. A neuropsychologist wrote Laura “continues to experience persistent cognitive impairments, cognitive weaknesses and variable functions after a number of environmental exposures in China.”

(NBC News: “Evacuated after ‘health attacks’ in Cuba and China, diplomats face new ordeals in U.S.” Fox WXXV 25, October 29 2018) (Josh Lederman and Andrea Mitchell: “Mother of U.S. diplomat hurt in ‘health attack’ speaks out” NBC News, November 20 2018, 4 min.)

Microwave weapon main suspect

“It’s devastated our lives,” Laura Hughes said. “We’ll never be the same.” Scientists familiar with the investigations said they were looking into the possibility that an EM microwave weapon was used. Douglas Smith, director of the University of Pennsylvania’s Center for Brain Injury and Repair, said “It’s almost like a concussion, but without a concussion.”

(Snejana Farberov: “‘She’s just a shell of what she was’: US diplomat injured in mystery ‘brain’ attack in China is identified - as her mother speaks out about her harrowing chronic illness” Daily Mail, November 21 2018; Will Pavia: “US envoy suffers brain injury in Chinese ‘sonic attack’” Times, November 21 2018)

ES symptoms: cognitive, balance, focusing, headaches, hearing – ‘like concussion’

Of the 21 individuals assessed at Penn, 17 reported cognitive or behavioral problems such as difficulty remembering, concentrating, or both. “It’s not that any patient can’t do a given task, but it requires way more effort. They don’t have as much cognitive reserve,” said coauthor Randel Swanson. Other symptoms included balance problems in 15, convergence insufficiency — where the eyes can’t work together to focus on nearby objects — in 11, sleep impairment in 18, and headaches in 16. Thirteen were referred to cognitive rehabilitation, 17 to rehabilitation to improve their balance, and 14 to rehabilitation to improve their eye function. Three received hearing aids for sensorineural hearing loss. “If you took any one of these patients and put them into a brain injury clinic, and you didn’t know their background, you would think that they had a traumatic brain injury from being in a car accident or a blast in the military,” Swanson said. “It’s like a concussion without a concussion.”

(Rubin R., JAMA. 2018)



Canadians: children’s nosebleeds same night same time

Unlike the U.S. State Department, the Canadian government did not forcibly evacuate its diplomats from Cuba. An estimated dozen Canadian diplomats and family members suffered nearly identical symptoms to those of the Americans. The diplomats were not warned and said that the only reason they figured out what was happening was a conversation with one of the affected Americans, who warned, “Our governments are not telling us.” Two of the Canadian diplomats said they further suspected when two of their children suffered “violent nosebleeds on the same night at roughly the same time.” The Canadians further complain that their government initially

blocked them from traveling to Philadelphia to have the medical team there compare their symptoms to the Americans’. Some eventually did make it to the United States, where doctors diagnosed them with the same malady as their American peers. (Frances Martel: “Violent Nosebleeds’ and Dogs Vomiting Blood: Victims of Cuba, China ‘Sonic’ Attacks Speak” Breitbart, November 20 2018)

Microwave weapons: brain injury or mass hysteria?

Reactions to the microwave attacks show differing attitudes to physiological evidence - the Editor.

The US State Department reported that, from late 2016, 26 people from its Embassy in Cuba reported medical symptoms consistent with traumatic brain injury. Since these are symptoms of microwave exposure, microwave weapons were immediately suspected. Microwaves were used against the women Greenham Common protestors in the 1980s causing similar effects. The USA developed microwave weapons in its Project Pandora during the 1960-70s, in response to the USSR’s use of microwave weapons from 1953. Numerous US Navy and CIA documents, now released, along with many other scientific studies from the 1960-70s, give these specific symptoms caused by microwaves. Microwave weapons have been used widely in middle eastern warfare. The diplomats’ symptoms also fit well with numerous studies since the 1930s establishing these specific ES symptoms.

These physiological symptoms were confirmed by Dr Douglas H. Smith, Professor of Neurosurgery and Director of the Center for Brain Injury and Repair at the University of Pennsylvania, coauthor of the medical report on the US diplomats (Swanson RL II et al, JAMA, 2018). He considered microwaves a main suspect in the Cuba case and he and his colleagues were increasingly certain that the patients have brain damage. This was the only medical team to examine the diplomats (New York Times, September 1 2018).

In contrast, a few others, without examining the patients, claimed they were psychological effects. The Washington Post (September 6 2018) made the extraordinary claim that: “No microwave weapon that affects the brain is known to exist”. This ignores the long history of microwave weapons, as listed above.

Kenneth R Foster, professor of bioengineering at the University of Pennsylvania, allegedly said that the reported illnesses remain “mysterious” and that he did not have an explanation, although he did not apparently examine the diplomats. He explained that that the Pennsylvania scientists’ findings were wrong: “It’s crazy. But it’s sure as heck not microwaves.” He said speculation on the exact cause “hinders relations between the two countries” but instead speculated that “pre-existing diseases or stress-induced exacerbation of functional disorders” were possible causes (letter, Science, 2018).

Foster has written many studies on thermal effects in relation to thermal guidelines like ICNIRP’s but has been criticised (Pall ML, Env Res., 2018) under seven headings for his claim that Wifi has no biological effects (Foster & Moulder, Health Phys., 2013). As regards EHS, which shares the US diplomats’ specific symptoms from microwave exposure, Foster stated in 2013 (IEEE Microwave Magazine): “many individuals report nonspecific symptoms when they are exposed to RF energy from mobile phones and other devices, a phenomenon termed ‘electrical hypersensitivity (EHS)’. So far investigators have been unable to relate the symptoms reported by EHS individuals to actual exposure to RF fields”, referencing Barth A et al, (Bioelectromagnetics, 2012) on studies of short-term effects among unscreened groups of the general public who may not have included any

people with EHS, not on people diagnosed by objective tests as having EHS.

Unsurprisingly, the panel set up in 2017 by the Cuban government concluded that the US diplomats probably suffered a “collective psychogenic disorder” brought on by stress. This was also proposed by the sociologist Bartholomew (JRSocMed, 2017), who sees it as a form of mass hysteria (Bartholomew, Wessely and Rubin GJ, JRSocMed, 2012).

Dyer’s article (BMJ, 2018) confirms that a psychological explanation is unlikely: “The psychogenic theory has been undermined by the passage of time, the [Pennsylvania] team believes, as symptoms have persisted and most of the patients have shown little improvement. Only seven of the 21 diplomats affected have been able to return to work.”

The admission of physiological cerebral microwave damage was confirmed by Prof. Golomb (Neur. Comput., 2018) and by details in the NBC News reports, making collective psychogenic disorders impossible, since they do not involve the brain damage shown by the evidence from fMRI scans.



SCIENCE: ES AND EHS PROVED AGAIN

EHS is proved yet again, by RF diaries: different from Electrophobia

A study from the Netherlands (Bogers RP et al, “Individual variation in temporal relationships between exposure to radiofrequency electromagnetic fields and non-specific physical symptoms: A new approach in studying ‘electrosensitivity’”, Envir Int., 2018) has concluded that: *“RF-EMF exposure was associated either positively or negatively with NSPS [symptoms] in some but not all of the selected self-declared EHS persons.”*

The 7 participants, who were not diagnosed for EHS using objective tests but claimed sensitivity, wore personal exposure meters and kept a diary

of specific symptoms every 6 hours.

Four showed *“statistically significant correlations between perceived and actual exposure to wireless internet (WiFi - rate of change and number of peaks above threshold) and base stations for mobile telecommunications (GSM + UMTS downlink, rate of change)”* and their symptom scores. *“In two persons a higher EMF exposure was associated with higher symptom scores, and in two other persons it was associated with lower scores.”*

In addition to confirming the association of EHS symptoms with exposure, it also confirmed that:

(a) time-weighted average power density, as used for 6-minute heating guidelines like ICNIRP, (uW/m²) is irrelevant and not significantly correlated for biological effects like EHS,

(b) rate of change metric (RCM) is more relevant than measurement of constant exposure,

(c) only 1 of the 7 subjects suffered from Electrophobia or the nocebo effect, and not EHS: *"In one participant increases in the perception of being exposed to downlink and WiFi were both related to increased symptom reporting, but perceived and actual exposure were not."*

(d) individual or idiographic results, and not statistically averaged or nomothetic results, are essential for studying cases of EHS,

(e) the most common specific EHS symptoms, established since 1932, are headaches and fatigue, along with tinnitus, light-headedness, unsettled feeling and muscle ache.



ES proved yet again: Key breakthrough in magnetoreception: ES is a fact!

Prof. Denis Henshaw reports on three new scientific studies which show how it is now established how magnetic fields affect health:

1. Cryptochromes are the magneto-receptors in animals: flies without cryptochrome do NOT respond to magnetic fields, but can do so by inserting HUMAN cryptochromes.
2. All cells in the body express cryptochromes.
3. It was thought that the magnetoreceptivity of cryptochromes depended on light. However, a 2018 paper co-authored by Margaret Ahmad (Pooam M et al.) shows that cryptochromes are magnetosensitive in the DARK. This means that all of the cells in your body respond to very low intensity magnetic fields.
4. Another 2018 paper co-authored by Margaret Ahmad (Sherrard RM et al.) reports that MFs induce cryptochromes to produce Reactive Oxygen Species or ROS. These are BAD for you (there was no effect on flies without cryptochrome used as a control).

Punchline: All health effects of magnetic fields now follow, including electrosensitivity. Game, set and match....

Landler L et al.: "Cryptochrome: The magnetosensor with a sinister side?" PLoS Biol., 2018.

Pooam M et al.: "Magnetic sensitivity mediated by the Arabidopsis blue-light receptor cryptochrome occurs during flavin reoxidation in the dark" Planta, 2018.

Sherrard RM et al.: "Low-intensity electromagnetic fields induce human cryptochrome to modulate intracellular reactive oxygen species" PLoS Biol., 2018.

WIFI - RETROVIRUSES AND VGCCs

Wifi unleashes endogenous retroviruses causing chronic neurological illnesses

Excerpts from Dr Dietrich Klinghardt: "Exposure to WiFi & EMF's - Root Cause of Health Problems"
(YouTube, August 5 2018)

"This is probably the most important lecture that I have ever given in my life. We have an onslaught of chronic illness in our time. The health span, the years we spend in good health, is automatically shortening every year and the key cause of that are chronic neurological illnesses such as Alzheimer's Disease; in children, autism, behavioural problems, learning problems, ADHD. In adults, it's chronic fatigue, fibromyalgia, Multiple Sclerosis, ALS, Parkinson's, and so forth.

Through the work of some brilliant researchers, Frank Rusceti and Judy Mikovits, we found that the deeper cause of the illnesses are the human endogenous retroviruses. These are viruses deeply embedded in the DNA for probably millions of years. And they have been silenced by our different wonderful administrative mechanisms that we have in our cells, largely its methylation and acetylation.

Once these retroviruses are unleashed, they are self-duplicating and cause symptoms very similar to AIDs. People have chronic fatigue, they lose weight, they have food allergies, leaky gut, they have inflammation in the brain. It looks like their

entire system is on fire. At the deepest level we find the retroviruses.

What is unleashing them? Well, I can sum it up in one sentence: "It's the exposure to Wi-Fi radiation, the EMFs that we are bathed in now that are ever-increasing that have been shown to unleash the retroviruses." Also, our natural immune system, the microbiome, is being severely damaged by Atrazine and other environmental toxins. Basically we have created a situation where our immune system is no longer able to control our own endogenous pathogens that we are born with. And so our system is crying out for help...

The most powerful treatment is Mediterranean plant, the Rock Rose, *Cistus Incanus*. This plant developed a huge number of plant-based antioxidants and plant adaptogens."

How 10 Hz Wifi causes calcium flux and ES symptoms

Excerpts from an explanation by Dr Andrew Goldsworthy (November 2018):

The problem with the Wifi 10 Hz beacon is not its power but its wave-form. The machine-gun-like signal you hear on your Acoustimeter is NOT the 10Hz beacon. This is in the infra-sound range (below hearing). All you hear are its harmonics.

If you were to look at the cone of a bass speaker trying to reproduce the WiFi signal, you would see massive excursions at 10Hz with relatively tiny ripples superimposed on it. At high frequencies, the coil has little time to move in one direction before it is told to go back again. But at lower frequencies (e.g. 10 Hz), even at the same energy level, it will travel further before it is told to return so the amplitude of motion is much greater.

Living cell membranes are electrically charged and will try to vibrate at the frequency of an applied field and the amplitude of this vibration will be greater at lower frequencies. But this vibration can open stretch-sensitive ion channels (mechanoreceptors) in the membrane to reduce the voltage across it (the membrane potential). This, in turn will open voltage-gated calcium channels (see Martin Pall's work) which amplifies the effect still further and lets more biologically active calcium ions into the cell. This stimulates the cells of the brain and nervous system into hyperactivity and increases stress levels to give stress headaches and mental confusion.

The true cost of WiFi exposure could well be enormous. It's not just people known to have EHS who are affected. It is possible that we all are affected to some degree but most of us do not yet know it.

SEE WATER MEMORISING VIBRATIONS

See: water memorising frequencies

The conference on July 14 2018 at the Royal Society of Medicine in London on New Horizons in Water Science, called by Lord Ward-Atherton, featured world-renowned speakers, including Prof Gerald Pollock and Nobel Laureates Prof Emeritus Brian Josephson and Prof Luc Montagnier.

One of the most intriguing revelations was how water appears to remember sound vibrations, as shown by a new CymaScope developed by John Stuart Reid to make sound visible. This is just one of the many aspects of biological signalling now being discovered in water.

(John Stuart Reid: "New water memory research" *Caduceus*, 99, Summer 2018; Prof Brian Josephson: "[New Horizons in Water Science](#)", Royal Society of Medicine, July 2018, 33 m; Dana Ullman and Lionel Milgrom: "[Water and Homeopathy: Latest Discoveries at Science's Cutting Edge](#)", *Mercola*, October 31 2018)



[Could this be relevant to ES sufferers? - how water appears to raise its speed of memorising the acoustic frequency each time it is applied. Apparently Erwin Schliephake in 1928, four years before describing EHS, discovered that sound can accelerate healing. – Ed.]

ES AND CANCER

NTP study: RF radiation causes cancer: 'Clear Evidence' (highest category)

The National Institutes of Health (NIH) study by the National Toxicology Program (NTP) concluded there is 'clear evidence' (its highest rating) that male rats exposed to high levels of radio frequency radiation (RFR) like that used in 2G and 3G cell phones developed cancerous heart tumours. (NTP Press Release, November 1 2018).

The FDA asked the NIH to conduct the \$30 million study (using animals - it would be unethical and illegal on humans) to see if mobile phones cause cancer in humans. The answer: RF radiation is a carcinogen.

The lowest exposure levels were at levels allowed for mobile phones. (Alex Matthews-King: "Clear

evidence' of mobile phone radiation link to cancers in rats, US health agency concludes" Independent, November 2 2018)

Scientists warn men over mobile phones

Scientists warned that men in particular should take precautions about the levels of exposure from phones they receive.

(Olivia Tobin: "US study finds 'clear evidence' mobile phone signals do cause cancer" Evening Standard, November 2 2018)

'Clear evidence' radiation causes cancers

"There is now 'clear evidence' that cell phone radiation can cause cancers of the heart, brain and adrenal glands."

(Natalie Rahhal: "Cell phones ARE linked to cancer, landmark study finds: Results show 'clear evidence' of tumor growth after repeated exposure to radiation" Daily Mail, November 1 2018)

RF DESTROYS MEMORY SCREENS HARM SIGHT

Smartphone radiation "destroying memory"

A Swiss study of nearly 700 adolescents aged 12-17 found that smartphone radiation could be destroying their memory performance and that cumulative exposure to mobile devices over the course of a year negatively affects their figural memory. Figural memory is mainly located in the right hemisphere of the brain. Youngsters who hold their phone next to their right ear are the most affected by exposure to radiation. However, sending text messages, playing mobile games, and browsing the internet may also have negative effects. The effects of RF EMF were more pronounced in adolescents using the mobile phone on the right side of the head.

(Phoebe Weston: "Radiation from smartphones could trigger memory loss in teenagers (and right-handed users are the most likely to suffer), new study reveals" Daily Mail, July 20 2018)

Foerster M et al.: "A prospective cohort study of adolescents' memory performance and individual brain dose of microwave radiation from wireless communication" *Environ Health Perspectives*. (2018)

Electronic devices produce lower grades

New research shows that using electronic devices like mobile phones and laptops can lower students' grades. When attention is divided

between two tasks, fewer items regarding those tasks may be recalled later, a concept called "retention". Additional research on electronic devices shows that smart phones can reduce the ability to think to a person's full potential, and reveals that intense multitasking decreases the efficiency of completing a given task.

(K Riutzel: "Cellphones in classrooms contribute to failing grades: Study" ABC News, July 27 2018; Glass AL et al.: "Dividing attention in the classroom reduces exam performance" *Ed Psychol*. 2018)

Screen blue lights accelerates blindness

Scientists at the University of Toledo, USA, have found how blue light from smartphones, laptops etc. damages vision and can speed up blindness. Blue light, which has a shorter wavelength and more energy than other colours, triggers poisonous molecules to be generated in the eye's light-sensitive cells that can cause macular degeneration, an incurable condition that affects the middle part of vision. Macular degeneration, which affects 2.4% adults in the UK, is common among 50s-60s, and is caused by the death of photoreceptor (light-sensitive cells) in the retina.

(Press Association: "Blue light from phone screens accelerates blindness, study finds" Guardian, August 9 2018)

DHSC, PHE, COMARE AND FALSE CLAIMS

DHSC, PHE, COMARE: 'false' and 'undocumented' claims

The Department of Health and Social Care and its Public Health England, along with its COMARE, AGNIR and MTHR, have been used since the 1980s by successive UK governments as fronts to deny the established science on EM harm. This cover-up maximises industry profits, but devastates people's health and the NHS budget.

The attempted defence, like ICNIRP's with which they share personnel and which it follows, is still based on Schwan's 1953 mistake - his long-invalidated heating-only hypothesis. No serious scientist still accepts this basic fallacy. The majority of eastern scientists accepted non-thermal effects from the 1950s and the majority of western scientists switched by 2008, accepting non-thermal effects such as ES and EHS.

COMARE has announced that it is awaiting the ICNIRP/WHO EMF Project revision (Minutes, March 13 2018). This revision, however, is still based on Schwan's 1953 mistake and ICNIRP's obsolete heating-only guidelines which depend on 'undocumented' claims and 'false' statements. (Prof. ML Pall: Critique, October 8 2018).

PHE's AGNIR and Doll - to quash concerns about EMF

The notorious AGNIR committee was set up in 1990 to try to quash concerns about EMF, under the chairmanship of Sir Richard Doll, infamous for his switch to defending other polluting industries like Monsanto, asbestos, lead in petrol and nuclear radiation. It was abolished in 2017 after Dr Starkey's damning peer-reviewed critique which showed that AGNIR's outrageous non-peer-reviewed 2012 report was 'inaccurate' and 'unsafe', although PHE and the Department of Health are still referring to this report. Scientists say it ought to be withdrawn, given its inaccuracies and its damage to public health.

COMARE - to quash concerns about nuclear radiation

COMARE (Committee on Medical Aspects of Radiation in the Environment) was set up as a similar 'front' in 1985 to try to quash concerns about nuclear

radiation, after cancer clusters were found near Sellafield.

COMARE: not independent

COMARE is not independent of government. It was set up with its "members chosen by the government's Chief Medical Officer" and COMARE depends on the Department of Health and its PHE for its secretariat.

[Hansard, Minister of Health, July 25 1985, column 772-773.]



COMARE: no experts on real EHS, only on Electrophobia

None of the members of COMARE, its advisers or secretariat is an expert on diagnosing real physiological EHS, rather than the different

condition of psychological Electrophobia (nocebo effect), Real physiological EHS has been established robustly in the scientific literature much longer than Electrophobia, and some NHS hospitals and NHS GPs have been diagnosing real physiological EHS in the UK since 2014, as have centres abroad specialising in EHS. Courts in the UK since 2012 have recognised real physiological EHS rather than Electrophobia as a genuine disability and as sufficient to award financial compensation. "The Chairman noted that he was still to discuss with DHSC the suggestion of having a working group for NIR issues."

(Minutes of meeting July 3 2018, 2.6: ACTION: The Chairman)

COMARE: needs experts for 2.7 million with ES and EHS

A UK's government-sponsored study showed that some 4% of the UK's general population (2.7 million people) have some form of real ES or EHS. Only about 1% of people with real

physiological EHS also have Electrophobia (27,000 people). It would, therefore, be more cost effective for the NHS to ensure its staff are trained on real ES and EHS and not just Electrophobia, and its premises are adapted to their needs.

COMARE: scientist hounded
The extraordinary way in which Dr Chris Busby was hounded before COMARE's NGO meeting on September 12 2017 ("Dr Chris Busby: COMARE, aborted flight and "being chased by Our Man in Stockholm", ES-UK Newsletter, Winter 2017-18, 15(3) p.25) suggests that COMARE still resists scientific facts. The fact that COMARE found the facts "challenging" and gave "a very robust response" (COMARE, Minutes, November 21 2017, 2.4) indicates a one-sided scientific approach.

COMARE: false statement
COMARE's statement "It was noted that double blind studies have been done on electro-hypersensitivity and a link has not been found." (Minutes March 13 2018, 2.7 EMF concerns) is clearly scientifically false (Pall ML: Critique of ICNIRP Draft, October 8 2018). There are robust studies establishing convincingly and consistently the existence of real physiological EHS, quite apart from the different condition of Electrophobia. Such false statements undermine the committee's scientific credibility.

COMARE: 'due diligence'?
"Members agreed that it was important to maintain ongoing surveillance and provide reassurance that due diligence is taking place." (Minutes March 13 2018, 2.9 EMF concerns) The false statement denying a link gives

no reassurance of due diligence and shows a lack of expertise. "NGOs asked whether there is enough challenge in COMARE to look for alternative explanations of phenomena" (COMARE NGO Minutes, Sept. 12 2017, p.3) indicates a serious problem.

PHE's AGNIR Report: 'scientific misconduct' 'should be retracted'
From an article by Annelie Fitzgerald ("Mobile Phone Cover-up? Gov't advisory body disbanded – inaccurate and misleading conclusions remain" True Publica, October 17 2018)
The disbanding of AGNIR in May 2017 followed the revelation in December 2016 that AGNIR's latest assessment of the science on the health impacts of RF-EMFs was inaccurate and subject to conflicts of interest. UK neuroscientist Dr Sarah J. Starkey published a peer-reviewed paper, roundly criticising the AGNIR report, showing 'cherry-picking' and making it clear that the report was unsuitable for determining safe public exposure levels. Starkey's criticism was echoed by Dariusz Leszczynski of the University of Helsinki and an IARC member that classified RF-EMFs as a 2B possible human carcinogen. Describing reading the report as 'surreal', Leszczynski wrote that it appeared that 'the authors would either not understand the studies they read or had pre-written conclusions. It was like reading a wish list written by someone claiming that there [are] not and will never be any problems related to cell phone exposures.' He condemned the report as 'a biased review.' According to the British Medical

Journal's website, biases in reviewing science and in conclusions reached can be considered scientific misconduct. The AGNIR report also was subject to conflict of interest: AGNIR's chair and two of its members were also members of the controversial ICNIRP. Starkey is calling for the inaccurate 2012 AGNIR report (and government advice based on it) to be retracted and for there to be mechanisms put in place whereby incorrect government information can be corrected or removed, as can occur for peer-reviewed published scientific papers.



From a letter to Sec. of State for Education: need to 'update advice to schools'
"In the light of the inaccurate and misleading information within AGNIR 2012, as presented here by Dr Starkey, could you please advise as to how you will be updating your advice to schools, based on the evidence of risk of harm as given in Dr Starkey's paper and its supplementary information? In their response, DfE did not acknowledge whether or not they had read Dr Starkey's paper and they did not answer the question."
(Diana Hanson: "Open letter to The Rt Hon Damian Hinds MP, Secretary of State for Education" (SSITA, June 8 2018)

Dept. of Education: ignorant of evidence on Wifi dangers
"I can only reiterate that Wi-Fi in schools has been researched

independently and extensively to ensure it is safe to use around children and the population as a whole” (James Moxon, Ministerial and Public Communications Division, Department for Education, October 1 2018). Why have the ‘extensive’ researches of Mr Moxon’s advisors not included “Wifi is an important threat to human health” (Pall ML, July 2018)?

PHE and DHSC: need for accurate risk assessment

Rather than “no convincing” or “no consistent” evidence, a percentage is more accurate, as in: “Based on current UK government research, 4% of the population have conscious symptoms in the presence of EM devices, and 96% do not.”

PHE: senior adviser resigns over industry link

Sir Ian Gilmore, a senior adviser to PHE, has quit over PHE’s stance on drinking advice and relationship with the alcohol industry. Some 46 public health professionals called for PHE’s partnership with the alcohol industry to be halted. (Chris Smyth: “Alcohol adviser quits over quango’s links to drink industry” Times, September 11 2018; Petticrew M et al., “Partnerships with the alcohol industry at the expense of public health” Lancet, September 22 2018)

World Health Organization criticises PHE’s industry link

The WHO has criticised PHE over its decision to work with the alcohol industry. WHO said joint campaigns with industry did not work. (Chris Smyth: “Health agency criticised for link with alcohol industry” Times, September 22 2018)

PHE is ‘aligning itself with Big Tobacco, an industry responsible for more deaths than both world wars’

From a letter to the Times, August 21 2018, by Philip Barber, FRCP:

“In promoting vaping in enclosed spaces, PHE is aligning itself with Big Tobacco, an industry that is already responsible for more deaths than both world wars.”

Government hates being ‘well informed’

“There is nothing a government hates more than to be well informed; for it makes the process of arriving at decisions much more complicated and difficult.” John Maynard Keynes.

HEATING LIMITS: ICNIRP, GLORE – problems of secrecy and accountability

The ICNIRP: problems of secrecy, viewpoint and accountability

The ICNIRP’s still unresolved problems over its secrecy, membership with a predominantly single and minority viewpoint, and accountability, are illustrated by the way it seems unlikely to reply in detail to each of the submissions made on its draft. The 2008 financial crash, Dieselgate and Phonegate scandals show that transparency and accountability are essential.

Secrecy at GLORE

GLORE (Global Coordination of Research and Health Policy of RF Electromagnetic Fields) began over 20 years ago with Japan and Korea; the U.S. and European countries joined later. It met in Paris, November 12-13 2018. The second day’s meeting is by invitation only, to “discuss political/critical issues,” said K Watanabe in 2016. (“Japan and Korea Planning Their Own Cell Phone Animal Studies Verifying NTP Cancer Findings” Microwave News, October 23 2018)

ICNIRP: published replies to each comment?

Following GLORE 2018, ICNIRP was to have its own three-day meeting, for two days responding to more than 100 comments on its draft RF

guidelines, and then trying to complete a statement defining the ICNIRP’s basic philosophy. (“Japan and Korea Planning Their Own Cell Phone Animal Studies Verifying NTP Cancer Findings” Microwave News, October 23 2018)

ICNIRP’s claims ‘undocumented and false’

The ICNIRP is trying to keep its obsolete 6-minute heating guidelines based on Schwan’s invalidated hypothesis of 1953. Its draft guidelines are based on an anti-scientific set of claims which do not present a valid evaluation of the evidence.

Dr Martin Pall, Professor Emeritus of Washington State University, has written a devastating critique of ICNIRP’s draft guidelines, showing irrefutably how anti-scientific they are:

- they "have 64 different claims for which no evidence is provided"
- "undocumented claims that certain EMF effects have no demonstrated health impacts"
- "a fundamental logical flaw" where conflicts or inconsistencies are suggested "based on some superficial similarities, while providing no evidence whatsoever that any such inconsistencies actually exist".

A few excerpts: "When ICNIRP claims there is no evidence but there clearly is evidence, this destroys whatever credibility ICNIRP may have had. ICNIRP appears to be systematically avoiding citing and discussing review articles that discuss contrary findings and express contrary opinions to those expressed by ICNIRP." (p.10)

On the assertions about EHS ("*These human experimental studies provided evidence that 'belief about exposure' (e.g. the so-called 'nocebo effect'), and not exposure itself, is the relevant symptom determinant.*") he states:

"No evidence is provided in support of these assertions. ... there is much information about it [EHS] in the scientific literature. It has been shown in four studies that it is possible to identify people with apparent EHS and show that they can be tested in blinded fashion using objectively measurable responses, showing that they are genuinely hypersensitive when compared with normal controls.

There are other studies that show that there are genuine physiological changes occurring in EHS.

... These findings show that oxidative stress and lowered chemical metabolism have roles in causing EHS and that the ICNIRP claim that it is caused by a nocebo effect is again falsified.

Furthermore, it has been shown using fMRI that there are regions of the brain in EHS people who are especially sensitive to EMF stimulation.

It can be seen from this that EHS is a genuine hypersensitivity condition with major sensitivity responses in the brain. Consequently, not only is what ICNIRP says in this area undocumented, but also each of the ICNIRP claims is also false."

5G: ICNIRP needs revision

"The results also show that the peak-to-average ratio of 1,000 tolerated by the ICNIRP guidelines may lead to permanent tissue damage after even short exposures, highlighting the importance of revisiting existing exposure guidelines."

(Neufeld, E et al., Health Physics, 2018)

A copy of ES-UK's submission on the ICNIRP draft is on the ES-UK website (submissions).



ES STORIES

Headaches and anxiety from mast and phone

For a long time, Apeksh Yadav could not make sense of his chronic headaches and his suddenly irritable nature. He runs a grocery store in the Saidulajab area of Saket, in Delhi, India, and is a very busy man. The appearance of these afflictions has got him worried. He even consulted the family physician, who suggested that he was running himself into the ground and needed some rest. Fast forward a few weeks and Yadav found himself in conversation with one of his nephews. This was the first time he found out about electromagnetic radiation (EMR) from cell phone towers. He has lived for nearly a decade at a distance of about 3 km from the cell tower in

Saket. Further, he spent approximately three hours on his phone every day, just receiving and making calls, and even more time surfing the Internet, watching videos and listening to music. This got him thinking: Could this be the reason for his continuous dull headaches and inexplicable bouts of anxiety? To test out this theory, he consciously maintained a distance from his phone. He did not sleep with it next to him, nor did he feed his urge to use it for any other reasons unless absolutely necessary. At the end of three weeks, he said, "I don't know if I'm imagining it or something really has changed. But my headaches are not as frequent now and I feel more relaxed." (Sreya Deb: "Towering menace" The Patriot, November 23 2018)

‘Impossible to go to a restaurant, movies, holiday, hotel, concerts’

Photo: Stéphane Gerber

“A year ago, Pierre

Louis, luthier by profession, began to



experience headaches day and night, and insomnia. He consulted doctors who could find nothing wrong. One day, walking in the forest, there were moments when he felt well and others when he did not. He was holding his cell phone and noticed these changes were linked to the presence of a network. Over the coming weeks, one of his customers told him he suffered from the same symptoms due to exposure to electro-magnetic fields.

Pierre asked a specialist to come to his home to measure non-ionizing radiation. The specialist found it "conformed perfectly to the standards". On the brink of exhaustion, he decided to leave his home and live with his parents where he set up his workshop. The location, in a hollow behind a large rock, blocked the radiation. Pierre was persuaded he was suffering from electro-hypersensitivity (EHS). Since he has been living there, his headaches have disappeared, he can sleep, and he has recovered his energy. But when he goes to the village, he has to protect his head with a veil made of silver thread. If he stays in a heavily exposed place for two hours, it takes him two days to recover.

His social life has been reduced. He was president of the instrumental ensemble of La Neuveville and the sailing club, two activities he can no longer exercise. It has become impossible for him to go to a restaurant, to the movies, to leave on vacation and stay in a hotel. He cannot go as often to concerts in the capacity of his profession of luthier and believes his business will suffer.

Electrosensitivity is not recognized medically in Switzerland. The only way to get a medical certificate is to consult a psychiatrist. Some EHS people have lost their jobs, and have had to leave. Pierre feels he is lucky to be self-employed, to be able to work from home and to have been able to settle not too far away. He does not know what the future will bring. He hopes his body will recuperate and he will be able to live as before.”

(Céline Lo Ricco Châtelain: "The nightmare of a luthier sensitive to waves" ("Le cauchemar du luthier sensible aux ondes"), Le Quotidien Jurassien, September 13 2018; summary and translation in Towards Better Health, September 20 2018)

‘Shut off pace- maker, fatigue, headaches, loss of hair’

“On or about February 19, 2004, Sprint entered a hearing with the City of Phoenix, Arizona, for zoning of a cell phone tower approximately 20 feet from my property and work area. At that hearing, they assured the City and everyone, including me, that the tower would be totally safe. The permit was granted even after I explained that my business partner had a pace-maker, and it is a well-known fact that the cell towers interfere with pace-makers. Shortly after it was built, my partner had to leave the business due to the cell tower shutting off his pace-maker. His doctor told him to stay away from cell towers, which is what caused him to quit working.

Since the tower has been there, I have been experiencing severe fatigue, headaches and other physical problems. In December 2016, they installed more equipment on the tower, as they have done many times before and since then. Shortly after the December 2016 installation, I noticed I was losing my hair; by January 2017 – in less than 30 days – I had lost every hair on my body. Shortly after that I noticed they put a sign on the gate in front of the tower, which states “Unsafe for Human Exposure”. I feel now I am losing my memory ability too.”

(Jim, Cellphone Tower, Phoenix AZ, Mast Victims, September 20 2018)

Electric fences: ‘very bad headaches and perpetual body or head vibration’

“I feel electric fences from even 100 metres or more with very bad headaches and my perpetual body or head vibration becomes more intense and faster. I first became aware in a property which had an electric fence hidden by a tall hedge. Again I was very unwell when I stayed where the electric fence was supposed to be off, but someone had forgotten. It can give interference on Radio 4 Longwave, a pulsing click every other second which alerted me to it, and can carry up to a mile. Electric generators can also generate pulsing over a distance.”

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 electromagnetic fields and radiation -

Founded 2003

Registered Charity No.: 1103018

Contacts

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

A donation of £15 per year, or
whatever you can afford, helps with
the running costs of ES-UK.



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Professor Denis Henshaw
Professor Olle Johansson

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 peer-reviewed articles and 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 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, BM Box ES-UK, London, WC1N 3XX,
or email: michael@es-uk.info

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

The World Health Organization classifies **Electrosensitivity** as an **Environmental Intolerance (IEI-EMF)**.

IGNIR gives long-term biological exposure guidelines. ICNIRP's short-term heating limits are now obsolete.

- **Common symptoms:** headaches, skin problems, sleep disruption, lethargy, depression, memory loss, muscle pains, cardiac palpitations, irritability and some cancers. Some EHS people also react to chemicals.
- **Some NHS hospitals and GPs diagnose EHS.** Tests include: 3d fMRI, cerebral blood perfusion scans, heart rate variability, genetic DNA sequencing, a personal history of the onset of hyper-sensitivity and EM exposure.
- **The key treatment is avoiding radiation**, especially in bedrooms. Some sufferers use military-style shielding or protective clothing, or live in a remote area away from man-made radiation. A healthy lifestyle is advised.
- **4% of the UK population has some EM sensitivity**, according to a UK government-sponsored study, 0.1% severe sensitivity and 40% of adults subconscious sensitivity because of chronic inflammatory conditions.
- **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.
- **Mechanisms:** e.g. cryptochromes, VGCCs, retroviruses, ROS, Hsp70, demyelination, subtle energy etc.
- **The WHO's IARC classifies EMFs**, both Radio Frequency and ELF, as **2B possible human carcinogens**.
- **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.
- **Electrosensitivity is recognised legally by UK tribunals as a disability**, both for adults and children (since 2012). ES requires protection under the H&S At Work Act 1974 and ES functional impairment requires reasonable adjustment under the Equality Act 2010.