

# ELECTROSENSITIVITY AND ELECTROMAGNETIC-HYPERSENSITIVITY (ES/EHS) KEY FACTS

1. **Electrosensitivity (ES) and Electromagnetic-Hypersensitivity (EHS) are physical intolerances.**
2. **ES/EHS lead to environmental functional disabilities** caused by:
  - Radio Frequency Radiation (**RFR**) - e.g. *mobile phones, cordless phones, masts, WiFi, Bluetooth, smart meters, Wifi baby alarms, Bluetooth hearing aids, fitbits, CFLs, LEDs, TETRA, satellites.*
  - Electromagnetic Fields (**EMFs**) - e.g. *dirty electricity, electric cars, house wiring, powerlines..*
3. **Common symptoms of electrosensitivity** (it is multi-systemic and can affect all neural pathways): headaches, skin/eye problems, insomnia, fatigue, anxiety, memory loss, confusion, pain, palpitation, irritability, cancer, nausea, nosebleed, chemical/light sensitivity, imbalance, vertigo, tinnitus.
4. **The key treatment is avoiding RFR** (e.g. WiFi, smart meters, mobiles, masts) especially in bedrooms.
5. Some ES/EHS people use military-style **shielding** with silver netting or protective clothing, or **live far from man-made radiation** if they can find anywhere without man-made RFR environmental pollution.
6. **Mechanisms:** e.g. blood-brain-barrier breaches, cryptochromes, demyelination, Hsp70, mast cells, retrovirus, oxidative stress, ROS, trigeminal & vagal nerves, voltage-gated calcium channels (VGCC).
7. **Prevalence:** 1.2% (804,000 in UK) of the population has **severe sensitivity** and is **severely disabled**, 4% (2.7m) has **moderate sensitivity** (UK government-sponsored surveys), 80% has **conscious sensitivity** (e.g. chronic inflammation), and all humans - 100% - have **subconscious sensitivity**.
8. **The World Health Organization** classifies **ES/EHS** as a disabling **Environmental Intolerance (EI)**.
9. The WHO Backgrounder 296 (2005) gives causes, diagnosis and treatment for EPh (electrophobia), not for real ES/EHS - since 1959 the WHO has been **legally subservient** to the IAEA **radiation industry**.
10. **Other names for ES/EHS; Radio Wave Sickness** (1932), **Microwave Sickness** (1964), **EI-Allergy** (2000), **Ideopathic Environmental Intolerance - EMF** (2005), **EMF Intolerance Syndrome** (2009).
11. **International Classification of Disease Codes for ES/EHS: ICD-10-CM W90.0** (RFR), **W90.8** (ELF).
12. **Diagnosis of ES/EHS** has been made by some UK **NHS hospitals, consultants and GPs** since 2013.
13. **Diagnosis involves a clinical history of RFR/EMF sensitivity/exposure.** 20-60% of cases can show in other tests e.g. 3d fMRI, cerebral blood perfusion scans (UCTS), DNA, H, HRV, Hsp, MT, sAA, TSH.
14. Nordic Council of Ministers **diagnostic test** (2000): **eliminating RFR/EMF eliminates ES symptoms.**
15. **Conditions related** to ES include: Amyotrophic lateral sclerosis (ALS), Autism, Brain tumours, some Cancers, Chemical/Light Sensitivity, ME/Chronic Fatigue Syndrome, Demyelinating conditions, Diabetes, HNPP, Leukaemia, Mitochondrial diseases, Multiple Sclerosis, Post Viral Syndromes, etc.
16. **Viruses:** studies since 1960 show that EMFs/RFR can reduce immunity and thus increase susceptibility to viral infections, while it has long been known that viruses can react to geomagnetic events.
17. Since 2006, **UK employers** have **removed and banned Wifi, mobile phones, etc.,** for ill health and functional disability in people with ES/EHS (Health & Safety At Work Act 1974, Equality Act 2010).
18. **UK tribunals/courts have recognised EHS as a disability** and awarded compensation (2012 on).
19. They have also **fined employers** making accommodations for people with EHS **too slowly**.
20. A Dutch appeal court in 2020 recognised a person with EHS living 350 metres away and out of sight a planned mast as an **interested party** who should be involved in decisions on planning for masts.
21. **Local Councils** must **'improve public health'** (NHS Act 2006; NPPF 2019: 8b, 91, 92, cf.116).

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22. **Trade Unions** in the UK state that **carcinogens**, like RFR/EMFs, should be **avoided** in the workplace.
23. It has been known, since 1953, that **RFR causes cancer** and, since 1979, that **EMFs cause cancer**.
24. **The International Agency for Research on Cancer (IARC**, part of the WHO) classified EMFs, ELF and Radio Frequency Radiation, as **class 2B possible human carcinogens** (2001 and 2011).
25. Experts say (since 2013) RFR should be **reclassified as a class 1 certain human carcinogen**.
26. **Non-thermal effects of RFR are primary and cumulative**, with heating secondary (established 1930).
27. **RFR/EMFs can cause cancer** without heating, but  $\geq 1^\circ$  heat increase does not always cause cancer.
28. **Non-ionising RFR and EMFs can cause oxidative stress, DNA damage, cancer and ES/ EHS**.
29. **RFR/EMFs**, like other **non-ionising radiation**, e.g. sunlight, can be both beneficial and harmful.
30. **RFR/EMFs**, like other **non-ionising carcinogens** (dioxins/smoking/viruses), do not break chemical bonds.
31. **Non-thermal RFR guidelines** were the first non-ionising/ionising guidelines produced, in 1935 (USSR).
32. **IGNIR** (International Guidelines on Non-Ionising Radiation), Bioinitiative, EUROPAEM and Seletun, are **long-term non-thermal** guidelines to prevent **all** established ill health, not just short-term heating.
33. **Appeal court judges in the USA** in 2021 'hammered' the FCC for **still denying non-thermal effects**.
34. **The ICNIRP** is a **private** single-minority-viewpoint **cartel**, still based on Schwan's 1953 invalid heating limit regarded as **arbitrary** in 1957. Its averaged short-term heating limits support the RFR industry.
35. The **European Union Parliament** in 2008 voted ICNIRP's short-term heating guidelines as **obsolete**.
36. **The Council of Europe Parliamentary Assembly** voted for a **0.2 V/m limit** in 2011 (ICNIRP 134 V/m).
37. **ICNIRP** (2002) and **ANSI** (1966) accept that **people are harmed by RFR below their heating limits**.
38. **RFR/EMFs affect all health**, but **Individual sensitivity** depends on age, genetics, inflammation, etc.
39. **Humans are sensitive to geomagnetic disturbances**, eg sferics, solar/lunar effects, thunderstorms.
40. **Wildlife sensitivity**: all animals, plants, birds and insects, like humans, are sensitive to RFR/EMFs.
41. **Electrosensitivity** was first shown **in electrical researchers: ES in 1733** (du Fay), **EHS in 1746** (Trembley FRS, after the Leiden jar was invented); **from 1932 in electrical, radio and radar workers**.
42. Since the 1980s, **mobiles, computers and Wifi** caused ES/EHS to spread into the **whole population**.
43. **ES research began in 1730** at the Royal Society London (Stephen Gray FRS, the 'father of electricity').
44. **Russia and Poland researched most effects by 1970**. In the US, Glaser listed 2,300 studies in 1972.
45. The USA's **DARPA Project Iceman** (2020) is to prevent **harmful ES/EHS symptoms** in aircraft crew.
46. **Centres include**: ARTAC Paris, Breakspear Herts UK, CES Moscow, DARPA Caltech California, EMC Dallas Texas, HUSM Lleida Spain, JMU Virginia USA, Toronto WCH Canada, UC San Diego California.
47. **RFR as weapons** are used to cause ES symptoms (1953 on), e.g. Northern Ireland, Middle East wars.
48. There were **microwave attacks** on US/Canadian diplomats in Moscow (1953), Cuba (2017) and China.
49. **Underwriters refuse to insure RFR/EMF risks**, or they classify them as **high risk, like asbestos**.
50. **The different condition of psychological Electrophobia** (EPH) or Nocebo Effect, known since 1903, affects 1% of ES people. EPH's prior conditioning cannot apply to ES/EHS children or unaware adults. The industry 'front' **WHO/ICNIRP**, with UKHSA/PHE members, **conflated ES/EHS with EPH**,(2005).

*For further information, see: [www.es-uk.info/](http://www.es-uk.info/) , a charity founded in 2003 to support people in the UK with ES/EHS and to inform others of harm from RFR and EMFs.*

*M Bevington, April 16 2021*