

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

1. **Electrosensitivity (ES) and Electromagnetic-Hypersensitivity (EHS) are physical intolerances.**
2. ES/EHS are **environmental disabilities** from: Radio Frequency Radiation (**RFR**) (mobile & cordless phones, masts, WiFi, smart meters, CFLs, LEDs, TETRA), & Electromagnetic Fields (**EMFs**) (powerlines).
3. **Common symptoms:** headaches, skin/eye problems, insomnia, fatigue, anxiety, memory loss, confusion, pain, palpitation, irritability, cancer, nausea, nosebleed, chemical/light sensitivity, imbalance, tinnitus.
4. **The key treatment is avoiding radiation** (e.g. WiFi, smart meters, mobiles, 3G,4G and 5G masts and satellites) especially in bedrooms. Some EHS use military-style shielding with silver netting or protective clothing, or live far from man-made radiation if they can find anywhere without RFR pollution.
5. **Mechanisms:** e.g. blood-brain-barrier breaches, cryptochromes, demyelination, Hsp70, mast cells, retrovirus, oxidative stress, ROS, trigeminal & vagal nerves, voltage-gated calcium channels (VGCC).
6. 1.2% (804,000 in UK) has **severe sensitivity**, 4% (2.7m) **moderate sensitivity** (UK gov.-sponsored surveys), 80% **conscious sensitivity** (e.g. chronic inflammation), and 100% **subconscious sensitivity**.
7. **The World Health Organization (WHO)** classifies **ES/EHS** as an **Environmental Intolerance (IEI-EMF)** which can be disabling. Backgrounder 296 (2005) gives causes, diagnosis and treatment for EPh, not ES.
8. Various **ICD-10 codes** apply. ES/EHS is also known as **Microwave** or **Radio Wave Sickness**.
9. **Diagnosis of ES/EHS** has been made by some NHS hospitals, consultants and GPs since 2013. Diagnosis can include: clinical history of RFR/EMF sensitivity/exposure, 3d fMRI, cerebral blood perfusion scans (UCTS), DNA, H, HRV, Hsp, MT, sAA, TSH. **Reducing** man-made RFR/EMF reduces ES symptoms
10. **Conditions related** to ES include: Amyotrophic lateral sclerosis (ALS), Autism, Chemical/Light Sensitivity, Chronic Fatigue Syndrome, HNPP, Mitochondrial diseases, Multiple Sclerosis, Post Viral Syndromes, etc.
11. **Viruses:** EMFs and RFR can reduce immunity and thus can increase susceptibility to viral infections.
12. **UK employers ban Wifi/mobiles** for ES (since 2006) (Health & Safety At Work 1974, Equality Act 2010).
13. **UK tribunals and courts have recognised EHS as a disability** from 2012 and awarded compensation.
14. **Local Councils (UK):** required to 'improve public health' (NHS Act 2006), NPPF 2019(8b,91,92,cf.116).
15. **The International Agency for Research on Cancer (IARC, part of the WHO)** classifies EMFs, ELF and Radio Frequency Radiation, as **class 2B possible human carcinogens** (2001 and 2011).
16. Experts say (since 2013) RFR should be **reclassified as a class 1 certain human carcinogen**.
17. **Non-thermal effects of RFR are primary** with heating secondary (established 1930), and **cumulative**.
18. **RFR/EMFs can cause cancer** without heating, but  $\geq 1^\circ$  heat increase does not always cause cancer.
19. **Non-ionising RFR and EMFs can cause oxidative stress, DNA damage, cancer and ES/ EHS.** Like other non-ionising carcinogens (dioxins, smoking, viruses), they do not directly break chemical bonds.
20. **Non-thermal RFR guidelines were the first non-ionising/ionising guidelines produced**, in the 1930s.
21. **IGNIR** (International Guidelines on Non-Ionising Radiation) are **long-term non-thermal** guidelines, like Bioinitiative and EUROPAEM. The EU Parliament voted ICNIRP short-term heating limits obsolete (2008).
22. **The ICNIRP**, like the **WHO EMF Project**, is a private, single- and minority-viewpoint cartel based on Schwan's 1953 heating mistake, averages and short-term effects, thus supporting the wireless industry.
23. **ICNIRP (2002) and ANSI (1966) also recognise people harmed by RFR below heating limits.**  
**RFR/EMFs affect all, but Individual sensitivity varies** (age, genetics, inflammatory conditions, sex, etc).
24. **Humans are sensitive to geomagnetic disturbances**, eg sferics, thunderstorms, solar and lunar effects.
25. **Wildlife RFR/EMF sensitivity:** all animals, plants (eg immunity), birds (magnetic navigation), insects.
26. **Electrosensitivity was first described in 1733** and EHS in 1750. From 1932 it was shown in electrical, radio and radar workers. Since then it has spread into the general population along with wireless devices.
27. **Research into ES began in 1730** under the Royal Society London. **Russia** found many effects **by 1970.**  
**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.
28. **Governments and armies use RFR weapons** (since 1953) to cause ES symptoms, eg Mid. East wars.
29. **Underwriters refuse to insure RFR/EMF risks**, or classify them as **high risk, like asbestos**.
30. **The different condition of psychological Electrophobia** (EPh, nocebo effect, IEI-EMF), known since 1903, affects 1% of EHS people. EPh's prior conditioning cannot apply to EHS children and unaware adults. In 2005 the pro-industry cartel of WHO/ICNIRP conflated ES/EHS with EPh, ignoring key facts.

Further information: [www.es-uk.info/](http://www.es-uk.info/)

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