

Shielding from RFR and EMFs – An Introduction

Six steps:

- 1 - Measure the RFR/EMFs
- 2 - Compare the measurements with International Non-thermal Long-term Guidelines
- 3 - Work out the source of the RFR or EMFs, if you can
- 4 - Remove any harmful sources you can, especially those in your own home
- 5 - A. Consider shielding
B. Shielding challenges
- 6 - Moving home is an option to consider or even trial
- 7 - Do not be misled by unscientific claims that non-thermal RFR/EMF is 'safe'
- 8 - Further information and help

	SIX STEPS	ACTION and DETAILS	FURTHER DETAILS
1	<p>Measure the RFR and EMFs RFR= radio frequency radiation, from masts, mobiles, smart meters, Bluetooth, Wifi etc. EMFs = electromagnetic fields, from power cables, electrical appliances etc. <i>(EMFs include RFR)</i></p>	<p>Buy a meter(s) or detector(s). Some measure RFR - in Volts per meter, or V/m. Some measure EMFs - in V/m and - in nanotesla, or nT. Some measure both RFR and EMFs.</p>	<p>There are many meters and detectors available, typically from £100 to £400. See, e.g. IGNIR Supplement 2: Examples of Meters.</p>
2	<p>Compare the measurements with International Non-thermal Long-term Guidelines. The UK still uses ICNIRP's unscientific, unprotective and arbitrary heating guidelines. - ICNIRP protects only against heating and not against non-thermal cancers, ES, infertility and other established harms. - ICNIRP's guidelines are short-term, for 6 or 30 minutes. - ICNIRP's are based on averaged levels and not dangerous peaks.</p>	<p>RFR: aim for under: 0.02 V/m children, ES people 0.06 V/m night, healthy adults 0.2 V/m day, healthy adults (IGNIR) or 0.04 V/m children 0.05 V/m healthy adults (Bioinitiative) Some people with electro-sensitivity (ES) are affected adversely below 0.02 V/m. See: Bioinitiative 2012 EUROPAEM 2016 IGNIR 2018</p>	<p>By rotating the meter very slowly, the change in the level of the signal often shows where the RFR/EMF is coming from. Hold the meter steady for 30 seconds or more to pick up bursts of radiation from smart meters, which often transmit every 15 -30 seconds. Magnetic fields: aim for under: 100 nT children, ES people 300 nT night, healthy adults 1,000 nT day, healthy adults (IGNIR)</p>
3	<p>Work out the source of the RFR or EMFs, if you can.</p>	<p>Common sources of RFR/EMFs: - phone mast nearby - mobile phone - smart meter - Bluetooth or Wifi - Internet of Things RF radiation - power cables, switch box - electric motors, chargers either yours or a neighbour's.</p>	<p>The worst are long-term (>1 hr): - nearby phone mast - mobile phones and chargers - Wifi, smart meters - radio alarm clocks next to bed - electric blankets RFR/EMF effects are cumulative and long-term e.g. cancers, ES, infertility and neurological harm.</p>
4	<p>Remove any harmful sources you can, especially those in your own home</p>	<p>Personal items with RFR: e.g. mobile phone, iPad, Wifi laptop, Bluetooth ear phones, hearing aids, baby monitor, Fitbit</p>	<p>Fittings with RFR: e.g. router, boiler, fridge, washing machine, TV aerial amplifier, smart meter, doorbell/camera, security sensor</p>

5	<p>A. Consider shielding, if there are just one or two sources of RFR/EMFs.</p> <p><i>Use a meter to keep checking shielding effectiveness.</i></p>	<p>Try shielding where you (a) sleep and (b) sit longest.</p> <p>Anti-RFR window/frame film can help, screening or distance from cables, computers and TVs. Foil may help with Wifi/DECT and fine steel mesh with masts.</p>	<p>Nets for beds and desks are expensive (£1-2k) but moveable between rooms and houses.</p> <p>Avoid carbon paint on inside walls because of electric fields from cables. It is hard to remove. NB: if MCS, some can outgas.</p>
6	<p>B. Shielding challenges, especially if there are many sources of RFR/EMFs.</p> <p><i>Most RFR passes through ceilings, walls, floors, windows, doors and frames if they are not fully shielded.</i></p>	<p>Difficulties of multiple sources of RFR and EMFs:</p> <p>Flats or offices may have:</p> <ul style="list-style-type: none"> - numerous mobile phones ‘on’ - numerous Wifi systems - banks of smart meters - nearby phone masts - radiation from nearby buildings 	<p>Creating a Faraday Cage, with no RFR or EMFs, is nearly impossible in most homes and for ordinary living.</p> <p>A Faraday Cage can also be unhealthy, since humans depend on very low-level natural EMFs from the environment.</p>
7	<p>Moving home is an option to consider or even trial, if you live</p> <p>(a) in a flat, especially if it is not on the ground floor (b) in a semi-detached or terrace house (c) in a detached house close to another property (d) within 500m of a phone mast (e) within 200m of a street light with high frequency 5G antennas. Similar factors affect workplaces.</p>	<p>If you are forced to move home or job because of high RFR / EMFs, you should inform:</p> <ul style="list-style-type: none"> - your local authority. Your local council is required to ensure and improve public health in its area. - your MP. Your human and equality rights are being denied. <p>Parliament urgently needs to adopt non-thermal RFR/EMF limits. The EU voted ICNIRP’s heating limits obsolete in 2008.</p>	<p>Having to move home or job because of 2B carcinogen radiation may contravene e.g. the Health & Safety at Work Act 1974 and Equality Act 2010, if those responsible do not provide reasonable accommodations including effective shielding.</p> <p>This may also give rise to legal cases for common assault, abuse, nuisance, health risks or failure to ensure safe premises.</p>
8	<p>Do not be misled by the unscientific claims of industry and government (DHSC, PHE).</p> <p>They are wrong (a) to claim that non-thermal RFR/EMFs below ICNIRP heating levels are ‘safe’, and (b) to conflate physical intolerance to RFR/EMF with the different psychological condition electrophobia or ‘nocebo’ effect.</p> <p>ES symptoms caused by non-thermal RFR/EMFs are physical effects, often genetically based.</p>	<p>The overwhelming weight of the majority scientific evidence since 1733 shows that all people are affected by non-thermal RFR/EMFs and some people are disabled by them.</p> <p>Non-thermal RFR/EMFs are:</p> <ul style="list-style-type: none"> - a 2B cancer agent, known since 1953 to cause cancer - uninsurable, except as high risk like asbestos another carcinogen - used by the military in warfare since the 1950s. 	<p>The WHO ‘fact’ sheet 296 is out of date (2005) and wrong to claim invalidly that RFR/EMFs do not cause adverse symptoms at non-thermal levels.</p> <p>However, the WHO is correct to say that ES symptoms are caused by an environmental intolerance and can be disabling.</p> <p>This means that ES symptoms come under the Health & Safety at Work Act 1974 and Equality Act 2010.</p>
8	<p>Further information and help</p>	<p>Additional general information: Shielding from EMFs and RFR (ES-UK)</p> <p>Lists of RFR/EMF Surveyors and Suppliers of RFR/EMF Shielding: ES Directory</p>	<p>If you pay an EMF Surveyor or Supplier of EMF Shielding, ensure that what they suggest or supply can be removed or returned at no cost to you if it does not reduce RFR/EMFs sufficiently to an agreed level.</p>