

## May 2010 – ES awareness month

Her Excellency M. Jodi Rell, governor of the American state of Connecticut, has declared May 2010 as Electromagnetic Sensitivity Awareness Month. This follows many states and cities doing the same in May last year. It helps to warn others of the ever increasing electrosmog pollution with its risks of cancers and Alzheimer’s as well as EHS.

Bill Ritter Jr governor of Colorado has also declared May as ES awareness month. The declaration states that Electromagnetic Sensitivity is recognized by the Americans with Disabilities Act, the U.S. Access Board and numerous commissions, and that this illness may be preventable through the reduction or avoidance of electromagnetic radiations in both indoor and outdoor environments and by conducting further scientific research.

Also the mayor of Broward County, Florida, has again declared May as ES awareness month.

## How to help ruin a nation’s health: radio-emitting CFLs and wireless Smart Meters



See inside for how governments ignore scientific warnings and push ahead with known pollution devices like pulsed radio-emitting CFLs and wireless Smart Meters, thereby increasing electrosmog and illnesses.

## Police sue over ES symptoms- from Tetra/Airwave

Police officers say that EMR from Tetra has caused them to suffer ES ailments, including nausea, headaches, stomach pains and skin rashes. The Daily Telegraph on 1st January 2010 reported that the local branch of the Police Federation in the Lancashire Constabulary, the first in the UK to try out the Airwave network in 2001, has logged 176 individual complaints and now senior officials at the police authority are seeking legal advice on

how to deal with them and are speaking to their insurers. They have already made budget changes to allow for “a contingent liability in respect of Airwave liability claims”. Critics of Tetra, a “controversial” system according to the Daily Express on 2nd January, say its suppliers – Motorola for the handsets and O2 for the network – have made changes to prevent “audio anomalies” following civil claims against the Force and suppliers.



### Contents:

ES News	2
Dangers of ignorance of EHS	5
ES surveys: - European	5
- Japanese	5
London EHS seminar	6
Photos of ES effects	7
CFLs and EMF	8
ICNIRP and SCENIHR	11
UK news	12
International news	12
ES and Science	16
ES stories	17

## Do cars suffer ES?

Some parts of the media think the recall of Toyota cars for unexplained accelerator problems is to do with EMF interference on their electronic control systems. In 2001 it was reported: “On one make of coach, the electronically controlled automatic gearbox would change gear at the wrong time when passengers in certain seats used a GSM phone. This sort of incident led to mobile-phone bans in hospitals and on aircraft” (Police Federation “Police” Newsletter, March 2001).

## Dr Dietrich Klinghardt

Dr Dietrich Klinghardt has kindly accepted the invitation to become a Medical Adviser to ES-UK. He has written various papers, available at [www.klinghardtacademy.com](http://www.klinghardtacademy.com), and a recent UK presentation is available at [www.es-uk/podbean](http://www.es-uk/podbean).



Dr Klinghardt visits the UK every 6-8 weeks for consultations and he has an 18 month waiting list. Prior to assessing new cases he recommends removal of all amalgam and metal root canal work; switching off the fuse box at night; sleeping in an EMR proof bed tent; and adopting a gluten and dairy free diet for a trial period of some 3-6 months.

## Spreading the message

Well done to those people running ES-UK stalls in town markets. It generates interest with people prepared to discuss the issues of EMF pollution.

## ES and cars – send in your experience!

Do you have any experience of ES problems with specific makes of cars, or can you recommend any as not having particular problems? If so, please write in. Next-up warns about high levels of magnetic fields in the rear right seat of a Toyota Prius above the unshielded battery leads.

## Donations

Many thanks to all who give so generously to ES-UK. Don't forget you can now contribute online via the website. We are also immensely grateful to all those who give voluntarily so much of their time to work for the telephone helpline and other services such as the website, sending leaflets, the Newsletter, conferences, keeping the accounts, answering press queries and correspondence. There are ongoing costs for providing the resources for these services and it would be good to extend the range of advice we can offer to people with particular needs.

## Watch your blood!

Dr Magda Havas has made an interesting YouTube video (2.5 minutes), using a microscope to show some effects on her blood of exposure to electro-magnetic sources. She comments "I looked at my blood under a microscope before and after using a computer and a mobile phone. My blood returned to "normal" after 10 minutes away from a computer. Live blood analysis may be a useful diagnostic for testing people who are electrically sensitive."

<http://www.youtube.com/user/magdahavas#p/u/5/L7E36zGHxRw>

See also [www.ElectroSensitiveSociety.com](http://www.ElectroSensitiveSociety.com)



## EHS taken seriously elsewhere in the EU

*From a correspondent in the EU:*

"I've now got a medical certificate from Professor Belpomme certifying that I suffer from EMF Intolerance Syndrome (SICEM). As a result my problems are finally being taken seriously at work."

[Since Professor Belpomme is apparently inundated with EHS patients and probably unable to see any additional ones at present, this illustrates the need for a NHS centre in the UK which can diagnose and treat EHS. – Editor] It is reported that numerous institutions in France are now taking steps to adapt the working environment so that it can be tolerated by people suffering from electro-sensitivity.

# ES NEWS

## Beware of metal cooking pans!

*F de Wilde writes from Holland.*

As ES-sufferers we should get as little metal in our bodies as possible. If you cook in metal pans you always get a very little bit of the metal from the pans in your food or drink. You can taste this if you drink a cup of pure boiled water: it has a bad metal taste.

I started cooking in glass and pottery pans to see if that would affect my EHS. To my surprise the food tasted much better and more natural. The first two days I felt really bad and my ES got worse. The third day I felt much better and from that day on I have reacted less to EMFs and I recover more quickly.

For people with EHS it is really worthwhile to see if cooking without metal has a good effect on you too. The only metal I continue to use sometimes is my frying pan!

## Beware of radio frequency pollution from inkjet printers

Some inkjet computer printers seem to emit strong radio fields. They can cause interference on a radio up to a metre away – it explains some unexpected ES symptoms!



## Beware of radio frequency transients on gas pipes!

It is still legal in the UK to attach the earth from the house mains to a metal gas pipe. This can allow much of the return electric current to use the earth instead of the neutral wire. This then means that it can transmit radio frequency transients onto the metal gas pipes in your house.

You can check whether your wiring is sending current back along the gas pipe – the earthing wire should be visible in the gas meter box - by seeing if the magnetic field next to the gas pipe increases when you switch on, say, an electric oven. You can check whether there are radio frequency transients on it using a portable radio receiver.

## Excellent YouTube video

A 30 minute lecture by Dr Magda Havas is available on YouTube. She says “EHS is probably the most serious health event that we’re experiencing in North America”, stating that probably about 3% are seriously affected, 35% moderately and up to 50% mildly. She calls it the Rapid Aging Syndrome, based on the wide range of common symptoms.  
<http://www.youtube.com/watch?v=-H3dBHn6Jqo&feature=sdig&et=1266445373.2>

## “ES and EHS: A Summary”

Your Newsletter editor has put together a summary of the current state of research on various aspects of electro-sensitivity and electro-hypersensitivity. It is designed primarily for doctors but may be of interest to others. Its main text is 16 pages long but it is supported by over 800 references to scientific studies, including their PMID reference numbers where relevant.

It is available in printed form (£10 including postage and packing) or as a PDF (£5).

Either send a cheque payable to ES-UK, to: Ref.: Book, BM Box ES-UK, London, WC1N 3XX; or use the online donations service at [www.es-uk.info](http://www.es-uk.info) and send a confirming email with your mailing address to [media@es-uk.info](mailto:media@es-uk.info). Any profits go to ES-UK.

## For sale

VeilShield shielding fabric for sale, surplus to requirements. Originally purchased from [www.lessemf.com](http://www.lessemf.com). Good performance (40dB+), blocks incoming microwaves and WiFi, highly transparent, so ideal for windows, fine copper/nickel coated polyester mesh. Quantities available: 5.8 metres x 1.4 metres (one piece); 1.5 metres x 1 metre (four pieces). £30 per metre (approx 25% discount on retail, free p&p). Small samples and specs available on request. Contact: [sarahscott@zen8.freeserve.co.uk](mailto:sarahscott@zen8.freeserve.co.uk), Tel: 01480 812725.

## Last Newsletter – comments on sensitivity in doorways

*On greater sensitivity symptoms in doorways, page 3, Mary comments:*

“The wires in the walls carry the 50Hz ELFs and also seem to serve to pick up and carry the pulsed RF frequencies in the building. You can easily demonstrate this: get a portable battery powered radio, tune to AM, tune out of any station (white noise), turn the volume up and walk towards the doorway. The noise will probably increase, maybe with a squeal, pitch or even pulses of sound evident. For instance in my office I hear the pulsed sound anywhere in the office but it’s louder near the ceiling, walls and doorway (not the floor, but I’m on the ground floor). The pulsing is evident at about 550 KHz. The building is fitted with WiFi. The sound will vary according to what frequency the radio is tuned to and the direction it’s facing. Proximity to pretty much any RF output will affect the radio white noise in some way.”

## Last Newsletter – comments on metal bedsprings

Dear Editor, The idea in your February issue of using a navigational compass to check a bed has been around for a long time. I heard it from the IBN Germany (Baubiologie) 20 years ago. So I checked it out. A magnetic compass placed next to any iron will swing one way or the other. It is not possible to place a swinging compass over a piece of iron and it not to move. The bed springs will always make it move. This tells us nothing about the health of the bed. Even if the springs have developed an inherent magnetism, it will be static. Static magnetism has been shown to be harmless. Some people enjoy the calming effect of static magnets. I realise there is no true research on this yet but the anecdotal evidence is strong. If any of your readers suffer ES in the presence of static magnets, I should really like to know about it.

Best wishes

James Chappell, [electro@paradise.net.nz](mailto:electro@paradise.net.nz)

## Conserving the EHS wilderness environment

*From the January Newsletter of Elenydd Wilderness Hostels.*

“Roger described the area which includes Dolgoch as one of the last refuges for people severely affected by EHS, areas of Scotland providing the next nearest haven. The wilderness, he said, is of paramount importance and he urged careful consideration before planning alterations which might detract from its present status. We all know and appreciate how precious “our” bit of Wales is, but Roger has added a further dimension to its especial nature.”

# Typical ES symptoms and treatments

*This is taken mainly from the WHO factsheet of 2005.*

*Some parts of the factsheet are now inaccurate in suggesting psychological rather than physiological causes: a study of 2009, for instance, showed how some people can suffer spontaneous muscular sensitivity to radio and TV radiation.*

*Although the precise mechanism of electro-sensitivity is not proven, there are several plausible theories based on established scientific evidence, such as ion efflux from cell membranes and melatonin disruption.*

## Symptoms:

The symptoms most commonly experienced include dermatological symptoms

- redness,
- tingling,
- and burning sensations as well as neurasthenic and vegetative symptoms
- fatigue,
- tiredness,
- concentration difficulties,
- dizziness,
- nausea,
- heart palpitation,
- and digestive disturbances.

## Support:

- Doctors should assess “the workplace and home for factors that might contribute to the presented symptoms”.
- Self-help groups “can be a valuable resource for the EHS individual”.
- Governments “should provide appropriately targeted and balanced information about potential health hazards of EMF to EHS individuals, health-care professionals and employers”.

## Treatment:

The basic treatment remains removal of the EM radiation causing the harm, or shielding from it.

## How to protect yourself

In January Prevention.com posted 11 ways for anyone to protect themselves from the harm of radiation and dirty electricity. People who have been sensitized will need a more rigorous system of reducing exposure.

- avoid wireless when possible (radio EMF is cumulative, so use wired internet; switch WiFi off when not in use; keep routers as far as possible from your desk and children’s rooms),
- pick safer lightbulbs (avoid compact fluorescent bulbs and dimmers),
- stay away from the circuit-breaker (your bed should be 4 feet away, including the other side of a wall),
- choose an old landline telephone (re-install corded phones and avoid cordless phones),
- ban Bluetooth headsets (use mobiles on speakerphone or with a wired earpiece, text instead of talking, do not allow children to use cordless phones or mobiles except for emergencies),
- don’t use mobiles which need strong signals (e.g. in trains or cars, where the phone will irradiate you and those around you at full power),
- don’t carry a mobile like a beeper (keep a mobile or BlackBerry in your handbag or briefcase, ideally 3 feet away from you, or carry it in ‘flight’ mode),
- keep your laptop off your lap (some batteries emit radiation while charging, so use it unplugged),
- unplug what you’re not using (any device will emit an EMF while plugged in),
- think LCD over plasma (Liquid Crystal Displays emit less transient pollution on your electrical wiring than plasma screens),
- get your home tested (your utility company may provide a free room-by-room survey if you suspect high EMFs. Rooms can be shielded and filters (capacitors) can reduce dirty electricity).

## Beware! – ignorance of EHS among some doctors and psychiatrists in Canada

Although doctors in some countries are well aware of electro-sensitivity and some countries have pioneering EHS research institutes with medical scientists studying the EHS condition, doctors in other countries sometimes fail to diagnose the condition correctly. Dr David Fancy, whose own story is featured elsewhere in this Newsletter, has come across at least two disturbing cases in Canada.

Firstly, there was the case of a young man in his late 20s from Milton, Ontario, with an MBA from Sheridan who was third in sales nationally for a major international food services company. He became electrically sensitive from exposure to a new hand-held wireless stocking device his employers required him to carry around to measure inventories. He complained of headaches and pain from the new technology but his doctor appears to have been ignorant of the symptoms of electro-sensitivity and referred him to a psychiatrist. The psychiatrist, also seemingly ignorant of EHS, declared the EHS sufferer mentally incompetent. He was rejected by his family as a hypochondriac, and can no longer work. He ran out of money and lived on the streets and in a shelter for six months. The only way he is currently eligible for socially assisted housing is by demonstrating to his social worker that he is taking the daily doses of multiple anti-psychotics prescribed to him by the psychiatrist. He has therefore had to adopt subterfuges to avoid actually swallowing such inappropriate drugs for a condition now

associated by leading researchers with established cell membrane sensitivity and not the different condition of an EMF neurosis.

Secondly, there was a very sad case in Welland, Ontario. A woman was made electro-hypersensitive by working in a call centre. She was hospitalized for the pain she was experiencing in the enteric nervous system in her stomach that flared up when a new cell tower was installed next to her house. The doctors, again seemingly ignorant of recent research confirming electro-sensitivity, refused her requests to remove a wireless node outside her hospital room. Instead, they simply plied her with more and stronger painkillers and she finally died in hospital from a morphine overdose. The official cause of death was complications associated with acute liver failure.

Such cases show the importance of doctors keeping up to date with medical research and not being misled by spin-doctors or psychiatrists from governments and phone companies who want to keep their revenue sources. Misinformation can also distort the public's scientific understanding. A family in Simcoe, Ontario, had to sell their home when the husband, an accountant, started losing consciousness shortly after six cell antennae were placed on a water tower adjacent to their property. The man was ridiculed by an ignorant press and spat on in the street for bringing his concern to the town council. In fact 12 new cancers struck the 14 houses nearest the antennae in the two years following their installation.

---

## ES SURVEYS

### European ES survey

On 2nd November Next-up reported results of the first 500 replies from their European ES survey on the biological and health symptoms experienced by people living close to relay antennas. The following are a few general results.

There were slightly more women than men. The average age was 48. 44% lived more than 5 years near relay antennas, with 30% under 50m away. 30% are exposed to less than 0.6 V/m and 8% to more than 3 V/m. The most common symptoms (more than 50%) were: disturbed sleep (less so when away from home), then (in order of importance) headaches, irritability/nervousness, depressive tendencies, dizziness, nausea, digestive problems, difficulty in concentrating, chronic fatigue, skin problems, itching, cardiovascular problems, lowered libido, loss of memory, hearing disturbances, feelings of discomfort, difficulty in

moving. 83% do not use a mobile (or do so less than 20 min/day), 36% use a DECT phone, 23% use WiFi Internet, 45% are exposed to neighbours' WiFi radiation closer than 30m. 31% have moved because of radiation, 34% have installed protection, 8% sleep in a Faraday cage. 58% do something to remove the burden from their bodies. 22% consider that their health condition is stable but for 46% it is gradually deteriorating, and in 19% deteriorating rapidly. 76% of doctors know nothing about EHS or do not know how to deal with it; 17% think it is psychosomatic; 7% issued a prescription. 67% of people notice a difference when they are not in an irradiated area. 85% notice that their symptoms disappear or that their health improves when they are away from relay antennas, after an average time of 36 hours.

### Japanese EHS questionnaire

A small Japanese EHS questionnaire based on 75 respondents (average age 51 years) showed an increased diagnosis rate by doctors from 12% to 45% in the six years since the last questionnaire (based on a similar size of respondents), of whom 62% were told "to avoid EMFs" by hospitals and physicians. 56% were advised to take supplements and 32% to have metallic dental fillings removed.

For therapies, the combined scores for "very good" and "so-so good" gave first place to applied kinesiology (84% score) and then chiropractic (80%) for those taking them.

Counter-measures for EMFs included shielding (53%), changing from fluorescent to incandescent lights (30%), moving house to a low EMF area (24%), and buying low-EMF domestic appliances (23%).

For those suffering the onset of EHS

while working, 50% had to retire and 13% changed from full- to part-time.

Other people's mobile phones affected adversely 65% of respondents and 12% could not use public transport as a result. Two Japanese railway companies have mobile-free carriages for people with cardiac pacemakers. Most companies ask passengers not to use mobile phones near the elderly, pregnant and disabled people.

The most commonly experienced symptoms were: palpitation etc (88%), tiredness (85%), headaches and decreased concentration, memory and thinking (81%), and sleeping disorders (76%).

The most common EMF sources causing symptoms were: mobile phone masts, other people's mobile phones, computers and power-lines (71-60%). 13% reacted to UV sunlight and some also had common allergies or developed MCS before EHS.

The top eight EMF sources seeming to cause EHS onset were: phone masts (52%), computers (20%), electric domestic appliances (15%), followed by mobile phones, power lines and induction heating cookers (each 8-7%).

### **London seminar on EHS and current EMF standards**

This informative seminar was organised by the Radiation Research Trust, following on from their excellent conference in September 2008 at the Royal Society. It was held at the London headquarters of the Institute of Mechanical Engineers on 11th January and chaired by Steve Tetlow, the Institute's chief executive. Two of the leading international researchers into EHS gave fascinating lectures leading into a general discussion.

#### *Dr Oleg Grigoriev – Health and EMF Exposure: Protocol for Diagnostic Therapy*

Dr Oleg Grigoriev is the Vice Chairman of the Russian National CNIRP and Director of the Centre for Electromagnetic Safety in Moscow. This centre, part of the Federal Medical Biophysical Centre, is a research and assessment laboratory with five highly qualified professors

and doctors who are experts on EHS. Dr Grigoriev outlined their new developments in understanding, diagnosing and treating EHS, developed in 2008-2009 and building on the research conducted in Russia in the 1960s and 1970s when EHS was known as Radiowave Sickness.

The CEMS is interested in chronic rather than thermal effects of EMF exposure, determining sensitivity by the characteristics of an individual's reactions in the central nervous system. Because of difficulties with responses which are individual and polyparametrical, they look for two indications in their protocol, including latent periods of reaction and testing three kinds of EMF, 50 Hz, modulated radio frequency and unmodulated radio frequency, along with an assessment of previous EMF exposure at home and the workplace. Their clinical testing includes EEG, ECG, blood analysis, psychological and physiological tests and assessments of the thyroid and adrenal glands, paying special attention to the alpha-rhythm of the brain. Their name for EHS is the Asthenic Syndrome or the Asthenic-vegetative Syndrome. They distinguish this biophysical EMF syndrome from EMF neurosis.

The Centre's protocol has the status of a draft of the Standard of the Federal Medical Biophysical Centre of the Russian Federation. They anticipate that after their laboratories have been reconstructed by the end of 2010 and after further testing in 2011, the Protocol will be accepted as the Standard by the Ministry of Health in 2012.

#### *Professor Olle Johansson – Biologically based EMF human exposure guidelines*

As Associate Professor of the Experimental Dermatology Unit at the Karolinska Institute in Stockholm, Olle Johansson is already well known internationally as a leading expert on EHS. His lecture reviewed the implications of the 2007 UN Convention on Human Rights for persons with functional impairments. He emphasised that it was assumed that all such people should have full and never partial accessibility; this would apply equally to all functional impairments, whether mobility or EHS, and the criteria was not biological proof but the perception of the impaired person. The environment is

at fault, not the person.

He reviewed some of the recent history of EMF exposure guidelines. Following the Biolinitiative Report of 2007 the western scientific viewpoint has changed significantly, bringing it much closer to the biological outlook adopted in the USSR and Russia since the 1950s. Many involved western scientists are now arguing that biological limits are essential; moreover the European Parliament voted in 2008-9 that existing heat and shock limits are obsolete. Since scientific evidence for sub-thermal effects is now well established, many scientists now regard a heating measure like SAR as now inappropriate, as are separate and higher safety limits for occupational workers as opposed to those for the general population. Since EMF levels are rising fast, all new devices emitting EMFs should be tested before public release.

#### *Discussion*

Much of the following discussion concerned how soon political will-power would respond to the science. If the adoption of biological guidelines produced parallel environmental and cost advantages, as in reducing electricity demand, or obvious financial gains, as by reducing illness and thus cutting health service expenses, it could be a win-win situation. The other factor which will eventually force change will be the legal challenges, where courts around the world are already attributing health damage to EMFs. On the model of other pollutants such as polluted ground water and asbestos, such financial implications could lead to a swift change in government attitudes. And there are even moral implications now that the science is so well established and so many people are suffering from EMF pollution.

Congratulations to the RRT and its director, Eileen O'Connor, for initiating such an important seminar. It is an extraordinary, but sadly not unknown, situation in public health where the lead is being taken, not by far-sighted governments and advisory agencies supposedly responsible for public well-being, but by concerned and knowledgeable scientists and volunteers who are more alert to the significance of the science than the politicians.

## The effects of exposure to electro-magnetic radiation on the skin and body of an electro-sensitive person.



1. Legs covered in sores. The left leg has become misshapen and tissue has become fibrous. It is often numb if affected by the radiation from too many mobile phones.

2. The left arm is swollen with fluid following exposure to WiFi from a neighbouring property 50 feet away. The pain is unbearable, as if someone has thrown acid on it.



3. The right arm is 'sunburnt' because of radiation from a neighbour's property. Even though it is cold and snowing outside, the EHS sufferer has the central heating off and wears a nightdress.

4. This picture illustrates how electro-magnetic radiation can affect the skin like sunburn. The diagonal white line, arrowed, represents where there had been a fold in the skin, hiding it from the effects of the radiation. This "sunburn" from electro-magnetic radiation occurred inside the house in February when it was snowing outside.



# Compact Fluorescent Lights (CFLs) And Electro-magnetic Fields

*Incandescent bulbs are now being banned in the EU. Their replacements, energy-saving compact fluorescent light (CFL), have significant EMF dangers.*



## 1. Recommended EMF safety distances for CFLs

The German consumer organization Stiftung Warentest recommends keeping at least 1.5 metres from CFLs because of the electromagnetic pollution, while EMF UK recommends 2 metres. CRIEM says that they should not be used for reading, desk or bedside lights. The Swiss consumer magazine K-Tipp concluded that "All tested CFLs cause electrosmog" and the Swiss government recommends a safety distance of at least 30 cm because of the high EMFs. For people sensitive to EMFs there should be greater distances; some recommend up to 7 metres. Many sensitive people do not use any CFLs in their homes.

## 2. CFLs have electric fields up to 67 times above TCO limits

EMF health problems from the high electric and magnetic fields of CFLs have been known since 1992, when Baubiologie Maes' evidence was published in "Öko-Test". "The body currents caused by the unnecessary electrosmog of energy-saving lamps are 30 to 100 times higher than from incandescent lamps," according to Dr. Heinrich Eder of the Bavarian Environment Agency. Most CFLs exceed the accepted TCO safety limits, some by up to 67 times.

	Incan- descent bulb	Halogen bulb	TCO safety limit (at 30 cm)	"Öko-Test" (2008), 16 CFLs	German Federal Office for Radiation Protection BfS (2008), 37 CFLs
AC electric field: VLF: 2-400 kHz (electronic ballast)	0 V/m	0 V/m	1 V/m	7-15 V/m	4.8-59 V/m
AC electric field: ELF: 5-2,000 Hz (power frequency, 50 Hz)	10 V/m	10 V/m	10 V/m	30-42 V/m	
AC magnetic field: VLF: 2-400 kHz (electronic ballast)	0 nT	0 nT	25 nT	3-25 nT	

The German Friends of the Earth (BUND) in 2009 recommended for CFLs the TCO limit of 1 V/m for VLF (kHz range), and 10 V/m for ELF (50 Hz) at 30 cm, with 0.02 V/m for lamps used close to the body, and 0.2 V/m for VLF by 2015.

In 2008 Viglen called TCO'99 "the world leading labeling scheme for display equipment". TCO started in 1992 under the Swedish Confederation of Professional Employees and covers ecology, emissions, energy and ergonomics. About half of all display monitors now meet the TCO standards.

## 3. Harmonics and spikes of the CFL electric and magnetic fields

The problems of high electric and magnetic fields are made worse by many distortions to the sine-wave of the 50 Hz field. CFLs produce numerous harmonics and spikes across the entire kilohertz range from the power frequency, and into the megahertz range from the electronics frequency.

## 4. CFLs cause transients on wiring (LF radio transmissions)

CFLs impose low frequency transients on electric wiring, often known as "dirty electricity". These frequencies, in the kHz range and extending into the radio MHz range, have been shown to produce adverse health effects on humans, ranging from involuntary muscular movement among people who are EMF-sensitive to cancers and increased diabetes and MS. The health danger of transients has been called "one of the greatest practical discoveries of the modern era".

## 5. CFLs emit direct radio frequencies

CFLs act as radio transmitters – one radio ham is said to have constructed a transmitter using CFLs. Some GE electronically ballasted CFLs carry a warning against use "near maritime safety equipment or other critical navigation or communication equipment operating between 0.45-30MHz". The radio interference can be heard on a household radio receiver held near a CFL.

## 6. CFLs emit pulsed EMFs, not optical flicker

CFLs, like other fluorescent lights, require alternating current. In older fluorescent lights with magnetic balances the current flowed through the tube as a smooth sine wave at mains frequency of 50 Hz (50 cycles per second), making the light flash on and off 100 times a second. In years gone by this could have disturbed epileptics and migraine sufferers with a high critical flicker threshold.

Almost all CFLs now use electronic control gear, with a switched-mode power supply in the base of the lamp itself. It converts the mains AC to DC and chops it electronically into a series of sharp rectangular alternating pulses which light the lamp. Dr Goldsworthy states: "However, the new frequency, which is usually about 40 kHz, is so high and the gaps between pulses are so short that the relatively slow response of the phosphors can fill them easily.

Consequently, these lamps do not flash."

CFLs also produce from the electronic ballast EMF pulses at 100 Hz and 40-50 dB, similar to DECT cordless phones. The highest frequency, however, at which someone can perceive flicker is 70-90 Hz, depending on modulation and brightness, although a flicker fusion threshold above 60 Hz is rare and 16 Hz is the general fusion frame threshold. The HPA report (2008) appears to argue that optical flicker is a cause of people's adverse health reactions to CFLs, although the SCENIHR opinion of 2008 denied it was flicker; neither has recorded the health effects of the known EMF pulses from CFLs.

The CFL manufacturer Philips argued that flicker from early CFLs can even interfere with infra-red TV remote sensors, according to a front-page report in the Daily Telegraph on 12th April 2010, but Emma Clements, of Carshalton, Surrey, said that CFL bulbs in other parts of the house affected their Virgin Media Samsung set-top box, a problem confirmed by a Virgin Media spokesman.

If, therefore, CFLs do not flicker, the adverse health effects are probably from the EMF pulses on the brain and nervous system. The magnetic component of CFL radiation can, according to Dr Goldsworthy, “penetrate deep into the human body where it generates electrical voltages proportional to its rate of change. The rapid rise and fall times of these magnetic pulses can therefore give relatively massive and potentially damaging voltage spikes both in living cells and across their membranes.”

### 7. *EMFs and blurred vision*

EMF sensitivity is now regarded by many scientists as connected with membrane leakage through low-level EMF effects on the membrane voltage. This ion leakage across membranes explains the fuzzy vision people can experience near EMFs and CFLs. In responding to light the eye’s vision is activated by increased voltage across the membranes of light-sensing rods and cones, so, in reverse, membrane leakage can cause reduced vision or blurring – a common electro-sensitivity symptom. Some people experience temporary poor eyesight when working close to CFLs or in a high EMF environment, although if measured by an optician in an EMF-free environment their eye-sight seems fine.



### 8. *Gradual acceptance of the EMF dangers from CFLs*

Health Canada released data on EMF emissions from CFLs in March 2010. For the kHz range (VLF), the worst-case CFL is given as 126 V/m at 20 cm. This is 45% above the ICNIRP’s six-minute heating and shock exposure limit of 87 V/m, or, converted to a 30-cm distance, 56 times higher than the TCO limit of 1 V/m.

On 30th March 2010 swissinfo.ch, in a report headed “Study warns of green light bulb electrosmog”, stated that Swiss health officials are recommending that people stay at least 30 centimetres away from energy-saving light bulbs, to ensure the electric fields are well under international limits. Low- and medium-frequency magnetic and electric fields can induce electric currents in the body which, above a certain frequency, can stimulate nerves and muscles. The Swiss study, undertaken for the Federal Offices of Health and Energy, found that medium-frequency electric fields were primarily responsible for these currents. Depending on the lamp, current field densities in the immediate vicinity reach 10-55% of the 6-minute heating and shock exposure limit.



The UK HPA report of 2008, on the other hand, was limited to optical and not EMF issues, and it attributed adverse health effects to optical rather than EMF factors: “The optical output of all tested CFLs was modulated at a frequency between 15 and 40 kHz, representing the frequency of the electronic ballast. In addition, all had a 100 Hz envelope with modulation in excess of 15%. This degree of modulation at this frequency may be perceived and has been linked to a number of adverse effects.” (Khazova & O’Hagan “Optical radiation emissions from compact fluorescent lamps” 2008; HPA “Emissions from compact fluorescent lights” 9th October 2008) Critics suggest that the limitation to supposedly optical effects is to avoid admitting health problems from EMFs.

The HPA report blaming optical effects above the flicker threshold is opposed to the SCENIHR opinion (“Light Sensitivity”, 23rd September 2008, p.28) which found no problem with the optical emissions. The latter concluded: “It can therefore be concluded that the flicker from energy saving bulbs is most unlikely to produce significant adverse health effects even in flicker susceptible individuals.”

The SCENIHR opinion was unable to find many “suitable direct scientific data” on CFLs and health symptoms, and based some of their conclusions on inadequate Swiss evidence for EMFs from 2004. The Swiss Federal Office of Energy and the Swiss Federal Office of Public Health report (Bundesamt für Energie, 2004) used a rod instead of the recommended disc sensor for CFL VLF (kHz range) tests, producing extremely low results of 0.1-5 V/m, at odds with the common 15-60 V/m from most other tests. It enabled this report to claim that CFLs should be able to meet the TCO limit of 1 V/m. The testing was supported by two lighting manufacturers, Osram and Philips. On page 25 the report showed that one additional grounding conductor attached to a metal lampshade would allow a CFL to meet the TCO limits.

### 9. *The SCENIHR refuses to examine EMFs from CFLs*

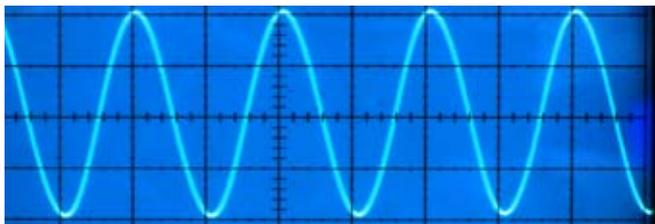
After its public consultation in January 2010, asking for further areas of concern about CFLs following its 2008 Lighting Sensitivity opinion, the SCENIHR refused to examine the EMFs from CFLs in the modified mandate:

“Electromagnetic fields, including those emitted by compact fluorescent lamps, were subject to previous opinions of SCENIHR”, referring to the January and July 2009 SCENIHR opinions on Health Effects of EMFs (“Explanations for the changes in the SCENIHR mandate on artificial light following the public consultation on the working mandate”, 2010, doc. 025b, section 3.2.2).

This is problematic, however. The radio frequencies from CFLs are in what the SCENIHR identifies as “the Intermediate Frequency range”. The 2007 SCENIHR opinion on “Health Effects of EMFs” concluded that “Experimental and epidemiological data from the IF range are very sparse. Therefore, assessment of acute health risks in the IF range is currently based on known hazards at

lower frequencies and higher frequencies.” The January 2009 opinion upheld this assessment. Neither of these SCENIHR opinions seems to refer to CFLs or their direct radio emissions or their transients or to published research on CFLs.

If, therefore, the SCENIHR refuses to consider the frequencies of EMFs known to be emitted from CFLs as the cause of the adverse health effects from CFLs, the revised SCENIHR report on Light Sensitivity due in 2011 could be forced to conclude that the adverse health effects from CFLs are caused by optical flicker, in opposition to its own conclusion of 2008. Alternatively it might postulate a high rate of UV-C emissions from all CFLs, if there is evidence that such emissions can produce typical EMF symptoms, or check any ultrasonic emissions which have been thought to disturb some household pets. The link between fluorescent lights and melanoma was established in the 1980s, however, when magnetic ballasts were in use. It therefore probably relates more to UV-B than to the recent studies showing a dose-response association between incidences of melanoma and EMFs with regard to the proximity and frequency of VHF radio transmissions.



#### **10. EMFs from CFLs as a cause of migraines and epilepsy**

It is likely that, apart from known UV effects, some or most of the adverse health effects of CFLs are caused by EMFs and not unknown UV-A/B/C effects or supposed optical flicker. Some people sensitive to EMFs experience similar symptoms from both CFLs and other sources of EMFs which do not emit UV or flicker, or can suffer from CFLs even when shielded from their light but not their radio emissions. Instances of migraine and epilepsy can also be triggered by other sources of EMFs in addition to CFLs. It is therefore possible that sufferers of migraine and epilepsy may be reacting more to the EMFs than the UV or supposed optical flicker in CFLs.

#### **11. EMFs from CFLs as an enhancer of photosensitivity**

UV reactions are probably enhanced by the presence of EMF emissions, since people sensitized to EMFs often become more photosensitive as a result of their EMF sensitisation. This could relate to the known effects of EMFs on mast cells found in the skin and elsewhere in the body.

#### **12. Case study: removal of CFLs helped end EMF symptoms**

Taken from an internet blog by Shivani Arjuna of 7th May 2005 warning about the health dangers of CFLs ([www.waccobb.net/forums/waccoreader/33382-cfl-dirty-electricity-post-esense-group.html](http://www.waccobb.net/forums/waccoreader/33382-cfl-dirty-electricity-post-esense-group.html)):

“You could not pay me any amount of money to use CFL bulbs in our house. In my own case, symptoms included severe insomnia, head pain, tingling of my left arm and leg and frightening cardiac arrhythmia. I had gone to the ER twice in an ambulance and undergone \$18,000 worth of medical tests before the cause of my symptoms was finally determined to be exposure to electrical pollution. (Not brain cancer, as had finally been suspected!) When we cleared my personal environment of the damaging frequencies, the symptoms disappeared. My thyroid also resumed healthy function and I was able to discontinue thyroid medication. The doctors who had followed my case were extremely surprised, as they so rarely see such a total cessation of cardiac or thyroid problems. I believe this would be more common, if more people removed the cause of their symptoms.”

#### **Further information:**

[www.youtube.com: www.news-service.admin.ch/NSBSubscriber/message/attachments/18707.pdf](http://www.youtube.com:www.news-service.admin.ch/NSBSubscriber/message/attachments/18707.pdf)

(2010) Nadakuduti J, Douglas M, Capstick M, Kühn S, Benkler S, Kuster N, Assessment of EM Exposure of Energy-Saving Bulbs & Possible Mitigation Strategies: Final Report, Bundesamt für Energie, Bundesamt für Gesundheit. (Published in: Bundesbehörden der Schweizer Eidgenossenschaften, pp.1-83.)

[www.buildingbiology.ca/cflights\\_govrep.php](http://www.buildingbiology.ca/cflights_govrep.php) (2010, government reactions to EMF health problems from CFLs)

[www.buildingbiology.ca/pdf/2009cflights.pdf](http://www.buildingbiology.ca/pdf/2009cflights.pdf) (Wolfgang Maes, “In the Cold Light of Day: Energy-Saving Lamps”, Wohnung+Gesundheit (“Home and Health”), Baubiologie Maes (Building Biology Standard), Special Supplement, Issue 133, 2009, trans. Katharina Gustavs)

[www.cfiimpact.com/?p=187](http://www.cfiimpact.com/?p=187) (2009, CBC TV, CFLs and EMF transients)

[www.cfiimpact.com/wp-content/uploads/drgoldsworthy.pdf](http://www.cfiimpact.com/wp-content/uploads/drgoldsworthy.pdf) (2008, Dr Andrew Goldsworthy “CFLs: What you need to know about low energy lighting”)

[www.cfiimpact.com/wp-content/uploads/havas.pdf](http://www.cfiimpact.com/wp-content/uploads/havas.pdf) (2008, Dr Magda Havas “Health Concerns associated with Energy Efficient Lighting and their Electromagnetic Emissions”)

[www.cflightbulb.org/tag/emf/](http://www.cflightbulb.org/tag/emf/) (migraines, comparison with LED)

[www.emfuk.co.uk/CFL\\_Table/CFL%20Table.html](http://www.emfuk.co.uk/CFL_Table/CFL%20Table.html) (2009, tables of EF and MF measurements of specimen CFLs)

[www.emfuk.co.uk/CFL\\_Table/graphs.html](http://www.emfuk.co.uk/CFL_Table/graphs.html) (2009, oscillograms and spectrograms of specimen CFLs)

[www.youtube.com/watch?v=A55081TOIbQ&NR=1](http://www.youtube.com/watch?v=A55081TOIbQ&NR=1)

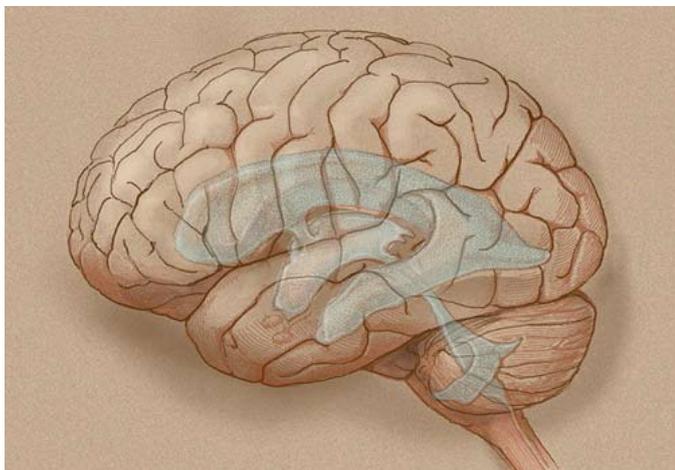
(Global TV, Canada, 2008: radio frequencies, low frequency transients and neurological problems)

[www.youtube.com/watch?v=6CVLa\\_tRsIY](http://www.youtube.com/watch?v=6CVLa_tRsIY) (Global TV, Canada, 2008: UV radiation and skin problems)

## The ICNIRP and SCENIHR – combined failure?

The ICNIRP's failure to develop effective biological guidelines on limits for chronic exposure to sub-thermal EMFs, in addition to its 6-minute heating and shock criteria, has long been regarded as one of the great scandals in contemporary public health. Commentators are probably correct to consider members of the ICNIRP as responsible for more human suffering than many of the world's worst dictators, if the links shown by studies going back several decades between low-level EMFs and numerous illnesses, such as Alzheimer's, leukaemia, brain tumours, Parkinson's, MND and many cancers, are valid. Historians have criticized the basis for the ICNIRP's obsolete guidelines as "a military-industry standard" by which the US and some global corporations seek to maintain their power and financial influence.

It therefore seems inappropriate for the SCENIHR, a key part of the EU's system for assessing biological and chronic dangers from low-level EMFs, to be closely linked with such a group as the ICNIRP. Any overlap of members is unlikely to increase genuine medical debate or scientific expertise, but rather reinforce the obsolete views of some of the ICNIRP's members who have so far failed to allow for the full range of sub-thermal effects. Yet this process of overlap appears to be accepted by the EU in its SCENIHR membership.



For instance, the SCENIHR opinion "Possible effects of EMFs on Human Health", adopted on 21st March 2007, was written by three SCENIHR members, of whom the chair was Anders Ahlbom, also a member of the ICNIRP, together with six external experts, of whom two have been ICNIRP members, René de Seze and Jukka Juutilainen. This opinion denied the existence of EHS: for low-level RF "no health effect has been consistently demonstrated" and "No consistent relationship between ELF fields and self-reported symptoms (sometimes referred to as EHS) has been demonstrated."

The 2007 opinion was updated by the SCENIHR opinion "Health Effects of Exposure to EMF", adopted on 19th January 2009, with the same three SCENIHR members, one of whom was also an ICNIRP member, together

with six external experts, of whom two have been ICNIRP members, Jukka Juutilainen and Eric van Rongen. The 2009 opinion continued the 2007 failure to accept EHS, although it at last admitted some evidence of conscious and subconscious symptoms from low-level RF exposure. Nevertheless it again denied most sub-thermal effects, following the ICNIRP, partly because they were not "consistent", although an idiopathic illness is, by definition, unlikely to produce "consistent" symptoms.



Later in 2009, however, the SCENIHR was required to envisage some possible research topics, listed in their curiously-named opinion "Research needs and methodology to address the remaining knowledge gaps on the potential health effects of EMF", adopted on 6th July 2009. This was written by five SCENIHR members, including Joachim Schüz, of the Danish Cancer Society, who had been an external expert for the two earlier EMF health reports. According to Microwave News of May 2007 he had tried to justify the ICNIRP's 100,000 nT magnetic field limit at an ICNIRP workshop in 2006 and apparently even claimed the childhood leukemia-EMF association discovered in 1979 "is neither supported by experimental evidence nor by a plausible [mechanism]". Microwave News added that "Schüz's views are in line with those of Paolo Vecchia and Mike Repacholi, the current and a former chair, respectively, of ICNIRP." This July 2009 opinion had four external experts, of whom two have been ICNIRP members, Jukka Juutilainen and Eric van Rongen.

Even the SCENIHR Light Sensitivity opinion, of 23rd September 2008, which followed WHO hypotheses and ICNIRP acute safety levels, had an ICNIRP member, F.R. de Gruijl, as one of its four external experts.

If the health of the UK and some of the rest of world is allowed to depend on such a small group of people, many of whom appear to deny biological health effects from chronic low-level EMFs, then it undermines the role of science, where perhaps the majority of involved independent researchers now accept such biological effects. It also continues to make life unpleasant for people who suffer the adverse effects of low-level EM radiation. To such members of the general population, their suffering may appear unnecessary and immoral, inflicted on them to profit a few greedy companies and governments. They may even ask whether their legislators have the moral courage and medical understanding to stand up for the vulnerable and injured, or can follow only the financial interests of a few.

**BT automatically creates WiFi pollution in your street and home**

From December 2009 people choosing BT Internet's "Home Hub" broadband have automatically also become members of the BT WiFi FON network. This means that they are allowing any other BT Internet FON customer to use their WiFi internet connection for free. BT and FON formed this link in 2007 and the website claims this is now available at 1/2 million sites in the UK and provides a map identifying WiFi FON hotspots by postcode. If you choose BT Internet, opting out of WiFi and thus out of BT FON apparently requires starting with BT FON and WiFi - a mad situation for EHS people. In addition Home Hub DECT phone's constant broadcast seems to stay on independently of the WiFi. (www.bt.com/static/wa/wifi/pages/findhotspots.html?s\_cid=con\_FURL\_btfon/hotspots) [BT Home Hubs can exceed in a neighbour's property the international BioInitiative 2007 indoor safety limits of 0.194 V/m, and frequently exceed the Salzburg indoor limits of 0.02 V/m. - Editor.]

**Smart meters add to EMF pollution**

The Times on 29th March reported that British Gas has jumped the gun by starting to install one million smart meters in UK homes this year, before the end of the government's trial period. They will be wireless using Vodafone Sim cards.

**Cars recalled over accelerator problems**

Toyota, Peugeot and Citroen have had to recall millions of cars for safety improvements. Electromagnetic interference from a range of devices, including mobile phones, phone masts and radio transmitters, can apparently disrupt the electronic signals to the sensor-driven electronic throttle control system, which controls the accelerator and thus the speed of the car.

**Unions' health concerns about Tetra-Airwave**

Several unions, such as GMB, PCS, RMT, UNISON and Unite, conducted a health and safety survey of members finishing on 31st March over continuing concerns about Tetra-Airwave.

**Free WiFi to be outlawed?**

The UK's Digital Economy Bill, implementing the US' Anti-Counterfeiting Trade Agreement (ACTA) which seeks to prevent copyright infringement, could end free public WiFi access, unprotected by a password, in universities, libraries and cafes. Even if such places use password protection, they may need to become an effective ISP, keeping records of everyone assigned connections.

**"The largest human biological experiment ever"**

Christopher Ketcham, in an article called "Lab rats with cellphones?" in the Los Angeles Times of 23rd February, quoted Professor Salford, chairman of the department of neurosurgery at Lund University, Sweden, who called the unregulated use of cellphones by 4.5 billion people worldwide "the largest human biological experiment ever." He found that cellphone radiation kills brain cells in rats, especially those cells associated with memory and learning, after an exposure of just two hours, and, duplicating earlier research, also found that cellphone microwaves produce holes in the barrier between the circulatory system and the brain in rats, giving a potential outcome of dementia. Ketcham added "It's only common sense to do what you can to take yourself out of the guinea pig pool."

**INTERNATIONAL NEWS**

**Widow warns of deadly mobile phone dangers**

On 7th March fresnobee.com reported that Mindy Brown is on a crusade to warn people about radiation from mobile phones. Her husband, Dan Brown, the Fresno State football coach, developed brain cancer and died aged 50 on 13th March 2009. Before slipping into a coma he said, "make sure everybody knows." She said, "I promised I would." Since his death, Mindy has campaigned across the US to keep her word to Dan, the high school sweetheart she married and the father of their six children.

She is convinced that mobile-phone radiation triggers cancerous brain tumours: "I'm so 100% sure ... I'd bet my life on it." In Dan's 12 years on the Bulldogs' coaching team he constantly had a phone to his ear, she said. Mindy saw that the people she met while Dan was being

treated bore scars from surgery on the side of their heads where they held their mobile phones. She won't stop her campaign, she said, until manufacturers put warnings on phones.

**Apple removes signal strength indicator**

On 5th March cnet reported that, according to TechCrunch, an Israeli developer called Tawkon created an app that measures your Specific Absorption Rate. The Tawkon app then factors in environmental conditions and phone usage in order to tell you in which location radiation is strongest while you are making a call by vibrating to the tune of the radiation levels. But Apple has removed this app. Nevertheless a BlackBerry version of the app is almost ready.



## US moves towards warnings and SAR labels on mobiles

The New York Times on 1st January reported on the move in Maine to put health warnings on mobiles. It added that in San Francisco, Mayor Gavin Newsom plans to introduce an amendment this year requiring that cellphone packages in the city display the amount of radiation a phone emits. "The mayor believes that cellphone safety is the next frontier," said Brian Purchia, a spokesman for Mr. Newsom, a Democrat. San Francisco's Commission on the Environment recommended in February that the State of California and the U.S. government require radiation warning labels on cell phones. Mark Leno, a Californian State Senator (D-San Francisco), introduced SB 1212, requiring cell phone manufacturers to provide Specific Absorption Rate (SAR) information to consumers.

## US warning on motorcycles and other vehicles

PRWeb on 10th January reported on Randall Dale Chipkar's International Motorcyclist Electromagnetic Safety Month Proclamation. Motor-cycle seats have excessive ELF EMF radiation, reaching 1000 nanoTesla up to 2 metres from the motor-cycle. Labels on motor-cycle seat warning of ELF EMF magnetic radiation emission would help consumers when purchasing bikes. Excessive ELF EMF radiation is said to involve motorcycles, quad bikes, all-terrain vehicles (ATVs), and hybrid-electric vehicles.

## Ban on masts

The Houston Chronicle on 12th January reported that the Commissioners Court outlawed the placement of cellular telephone towers within 300 feet of residential neighborhoods in unincorporated Harris County on a 5-0 vote.

## "A far more serious threat than tobacco"

Dr Mercola on 13th January stated on his website as regards electrosmog: "My belief is that this exponential increase in this type of radiation exposure is far more serious threat than tobacco ever was."



## EHS sufferer sues neighbour over WiFi and mobile

UPI.com reported on 8th January that Arthur Firstenberg filed a lawsuit in Santa Fe District Court alleging his neighbour Raphaella Monribot, whose house is only 25 feet from Firstenberg's, refused his requests to turn off her mobile, WiFi internet network and other electronic devices. He said these devices aggravate his electromagnetic sensitivity, or EMS. The plaintiff "cannot stay in a hotel, because hotels and motels all employ WiFi connections, which trigger a severe illness," his lawyer Lindsay Lovejoy said in a request for a preliminary injunction. "If [Firstenberg] cannot obtain preliminary relief, he will be forced to continue to sleep in his car, enduring winter cold and discomfort, until this case can be heard." Firstenberg wrote in an affidavit that Monribot "agreed to phase out the fluorescent lights" but would not replace dimmer switches or turn off her iPhone and computer when not in use.

## Los Angeles Times on ES

On 14th February the Los Angeles Times published an article by Chris Woolston called "Victims of electrosensitivity syndrome say EMFs cause symptoms". It quoted Dr Gro Harlem Brundtland, then the director-general of the World Health Organisation, telling the BBC that she didn't allow cellphones in her office because the radiation gave her headaches. But it then quoted a failed psychological provocation test and ignored the hundreds of research studies over the last five decades showing established and repeatable biological effects from low-level radiation. It would have been more interesting if the article had researched why some psychological tests succeed in finding ES symptoms but others fail and why many psychiatrists, governments and mobile phone companies want such tests to fail.

Dr David Carpenter of Albany University, New York, was quoted as saying "I'm not sure ES is real". In a KMJ radio interview, however, he said there were problems with some psychological laboratory tests but he thought it was "unlikely" there was not "some physiologic basis" for ES since so many people around the world have been suffering from ES symptoms attributed to EMFs.

## Director-General of the World Health Organisation in 2002 on children using mobiles

*From the report on 2nd July 2002 (BBC website: <http://news.bbc.co.uk/1/hi/health/2082310.stm>)*

"I would be cautious about letting children use mobile phones for hours every day, because we don't know enough about the damage," said WHO Director-General Gro Harlem Brundtland. Some tests have shown higher electromagnetic waves in places where mobiles are frequently used. Gro Harlem Brundtland does not own a mobile phone and has banned anyone from using them in her Geneva office. She says this is to protect herself from electromagnetic waves, which she argues give her a headache.

## Virginia delays smart meters

According to the March Newsletter of Moms for Safe Wireless, Dominion Power withdrew its application to the Virginia State Corporation Commission to install smart meters in Northern Virginia homes by 2013. David Botkins, media relations director of Dominion Power, said the company was doing more testing and responding to concerns about smart meter technology.

## Luxembourg ruling in favour of residents

Le Quotidien on 23rd February reported that an administrative court in Luxembourg on 14th July 2009 upheld a residents' challenge against the State's authorization of additional antennas near the water tower in Crauthem only 270 metres from their home. The court also declared the installation of the new antennas should have been subject to a public enquiry, also referring to the precautionary principle. As a result the Green Party is demanding a new limit of 0.6 V/m in place of the current 3 V/m. They also want a public enquiry and that the State should establish "White Zones" free of all radiation, and that the State should take regular readings of radiation installations.

## Health warnings by phone manufacturers

In an article in the Huffingtonpost.com on 8th March, called "Cell Phones – Read the Fine Print", Dr Devra Davis noted that many phones now have warnings that the phone must be kept away from the body. The Motorola V 195 has a restriction of 1.0 inch, the Blackberry 8300 0.98 inches, the Nokia 1100 0.25 inch, and the iPhone 5/8 inch. Several have statements that "phones SHOULD NOT be used or carried on the body." The pamphlet for Verizon's HTC Eris Droid cellphone recommends "that no part of the human body be allowed to come too close to the antenna during operation of the equipment," and an online appendix explained (p.219): "To comply with RF exposure requirements, a minimum separation distance of 1.5 cm must be maintained between the user's body and the handset, including the antenna."

These RF safety standards were set in 1997 to prevent heating in a six-foot tall man weighing 200 pounds with an 11 pound head talking for only six minutes. They were not set for long-term biological effects, or for children, or for talking for longer than six minutes.

## WiFi ill-health in schools

The Orilla Packet & Times in March published an article on Simcoe County parents, who say their children have experienced adverse health effects from WiFi in school. Rodney Palmer, who has two children, four and nine years old, at Mountain View Elementary School in Collingwood, informed the Simcoe County District School Board that some students were experiencing headaches, dizziness, distorted vision and other ES symptoms. His 4-year-old daughter would get a rash on her leg, but only at school. "It's really the long-term effects that I'm worried about. Introducing a 4-year-old to microwave radiation for six hours a day when it's not being used is profoundly unnecessary," he said; the majority of the school's eight transmitters are left on when they are not needed.



The longer people are exposed to EMFs, the more sensitive they become to them, and the symptoms become more severe, said Magda Havas, associate professor at Trent University.

A study in Sweden showed that human cells exposed to radiation at both 915 and 1,900 MHz had an impaired ability to heal themselves when exposed to either frequency. Havas helped with a 2008 blind study in Colorado using cordless phones at 2.4 gigahertz GHz, the frequency used in schools. Havas noted, when the phones were turned on, six people's hearts "started behaving erratically," she said, adding their heart activity normalized after the phones were shut off. "What we're using for WiFi in schools is basically a weaker microwave," she said. "With a microwave oven, you close the door and the microwaves are contained within the oven, whereas, with our schools, the microwaves are released into the environment. The school becomes the microwave."

## ES symptoms and illness from masts

On 13th December 2009 60 people, including bankers, engineers and housewives, who had suffered illness and injury from recently installed masts met in Mumbai, India. Many suffered the usual electrosensitivity symptoms of sleep disorders, restlessness and fatigue, but other had more serious illnesses. Within 4 months of moving into a top-floor flat below a mast Vijaya Bhat, 33, developed a brain tumour. Although she has moved away she said that "even a day's visit to the place I thought would be my home makes me sick physically." Her husband asked the politicians present, "Do you understand the problems we common people have to face because of mobile towers? We have to suffer and die." A neighbour gave birth to a child with birth defects who died soon afterwards. Mr Ramchandra Pradham, a journalist aged 83, broke into skin rashes after an Airtel tower was installed on his building. He said "My doctor has confirmed these rashes are linked to radiation from the mobile tower."

*A table, by L. B. Deshpande, a telecom engineer, showing deaths from people living with 300 feet (91.4 metres) of 2 mobile masts installed in 2005 in Solapur, India.*

DATE	CAUSE OF DEATH	AGE
2009	spinal cord cancer	17
2009	throat cancer	73
2009	liver cancer	52
2009	cancer	48
2008	breast cancer	52
2008	cancer	46
2007	rectum cancer	66
2006	oesophagus cancer	48
2005	breast cancer	66



## iPhone warning on ES symptoms

*From the iPhone manual, where ES symptoms are linked with flashing or bright lights:*

“Discontinue use of iPhone and consult a physician if you experience headaches, blackouts, seizures, convulsion, eye or muscle twitching, loss of awareness, involuntary movement, or disorientation. To reduce risk of headaches, blackouts, seizures, and eyestrain, avoid prolonged use, hold iPhone some distance from your eyes, use iPhone in a well lit room, and take frequent breaks.”

## Time magazine questions mobile safety

On 15th March Time magazine had an article called “How Safe Is Your Cell Phone?” by Bryan Walsh. It noted that a start-up, Pong Research, is selling cell-phone cases which significantly reduce radiation exposure. It concluded with Dr Siegal Sadetzki’s comment, “As a public health concern, I’m saying we definitely should adopt precautions.”

## Italian bill for EHS

A press release from Rome on 21st December gave details of MEP Domenico Scilipoti’s “An Italian Law Proposal for Environmental Illnesses and Disability”.

“In order to help people with Environmental Disabilities whose survival and quality of life depend not on drugs, but on avoiding certain environmental factors, today I presented a project of law about this issue”, comments On. Scilipoti. “The law is meant for environmentally triggered diseases such as Multiple Chemical Sensitivity (MCS), involving a loss of tolerance of chemicals, or Electromagnetic Hypersensitivity (EHS), forcing the affected ones to get far from electromagnetic fields emitted by mobiles, Wi-Fi, electric cables, etc. But the law is also meant for genetic, metabolic, neurological or immunological disorders such as fibromyalgia or CFS (involving chemical intolerances) or favism, which gives serious reactions to legumes. Other cases of environmental disability are seen in autism, epilepsy, migraine and lupus that involve reactions to fluorescent lighting”. “It’s important to discuss this law as soon as possible in order to give an answer to these people”, Scilipoti concludes.

## Response to “An Italian Law Proposal for Environmental Illnesses and Disability”

*Dr. George L. Carlo, the Science and Public Policy Institute, Washington, D.C., 28. December 2009:*

“I would like to offer support for this very important legislation. Environmental illness is most often unrecognized and while the incidence and prevalence is reported to be in the 4 to 5 percent range, our experience in supporting patients with the condition suggests the incidence of environmental health impact could be as high as sixty percent of the population. Your proposed legislation presents a model that I hope the rest of the world follows. You are to be congratulated for your prescience and foresight and many thousands of people will benefit from your action.”

## Appeal to European Court over environmental dangers

A preliminary application was submitted to the Registry of the European Court of Human Rights in Strasbourg on 30th June 2009 by counsel Paul Baakman on behalf of the inhabitants of Houtwijk, The Hague, against the Dutch government. The proceedings will fall within the European Convention secrecy rules. The counsel stated that the present clients feel that the Dutch environmental safety authorities pay insufficient attention to the prevention of health risks, with regard to the effects of long-term exposure of people to pulsed and non-pulsed non-ionizing radiation (electromagnetic radiation/ fields). Also, the appropriate Dutch legal procedures (under Administrative law) do not provide for adequate examination under the constitution (Art. 120 of the constitution is a barrier) and health factors cannot be considered in building permit proceedings. .

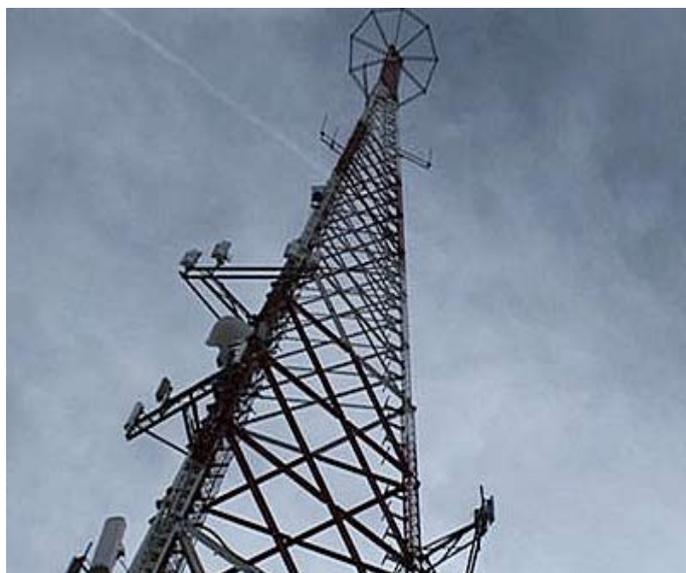


## “Are mobile phones killing our grandchildren?”

This was the title of the 18th March radio programme in a series on ZDNet by Phil Dobbie in Australia. The dangers of brain tumours are well known but the dangers of infertility and effects on the immune system are less well known.

## School cancer cluster legal case

In Bayville, Long Island, a water tower houses 52 cell phone antennas 50 feet across from the primary school and in very close proximity to residents. In the last few years, four Bayville Primary School children have been diagnosed with leukemia or brain tumors; three of the children have since died. In addition, six teachers and several school aids have been diagnosed with serious cancer. Four of the adults have subsequently died. When this property was donated to the town in the 1950’s it was not to be used for commercial uses. The Chicago Tribune on 8th January reported that Attorney Andrew Campanelli was launching a legal case over the masts: “We believe as much as 30% of the teachers, administrative staff and employees have been diagnosed with some type of illness, cancer, leukemia and things of that nature.”



## Cancer cluster near masts

La Razon in Spain reported from Seville on 8th January that parents at the Brenes Manuel de Falla school in Vega del Guadalquivir have tried for nine years to remove a mobile mast next to the playground. There are two further masts within 200m of the school. Two children attending the centre have been diagnosed with cancer and a third died of sudden death. There have been some 100 cancer cases in the neighbourhood.

On 18th January the Diario de Sevilla reported that even doctors in the main hospital in Seville ask each new patient if they live anywhere in Brenes. "In this part of town it's hard to find even one family where everyone is healthy." In addition to cancer cases there is a proliferation of thyroid conditions.

The phone mast was erected in 2001 but so far lawsuits are unresolved and have failed to stop increasing illness and deaths in the neighbourhood.

## Mayor calls for mast demonstration

The mayor of Chassieu, Lyon, on 30th January issued a statement in response to Orange erecting a phone mast under 200m



from homes and schools against the council's wishes: "I object strongly to this contemptuous, poisonous and irresponsible attitude towards the citizenry on the part of the premier mobile phone company in the country. I am calling for a strong mobilisation of the townspeople and, in general, of everyone who has anxieties about the effects that electromagnetic radiation at close range can have on public health."

## French court nearly accepts harmful ELF effects

On 28th October 2009 the high court sentenced Tulle TEN transmission system operator RTE electricity to pay 390,648 euros for the damage suffered by farmers located along a high voltage line (400 kV) in Latronche, Corrèze, as claimed by farming groups in common (GAEC) in compensation for harm to cattle and pigs. On 1st March, however, according to AFP's report of 2nd March, the special chamber of expropriation of the Limoges court of appeal reversed the earlier decision.

## ES AND SCIENCE

### Airport scanners could damage DNA

Natural News on 11th January reported that Millimetre Wave Scanners used for whole body imaging at airports, may damage human DNA. Airports are also introducing backscatter x-ray technology according to the Electronic Privacy Information Centre, which is suing the U.S. government to stop these electronic strip searches. Millimetre Wave Scanners emit terahertz photons, high-frequency energy "particles" that can pass through clothing and body tissue. A study by Boian S. Alexandrov at the Centre for Nonlinear Studies at Los Alamos National Laboratory in New Mexico showed that these terahertz waves could "...unzip double-stranded DNA, creating bubbles in the double strand that could significantly interfere with processes such as gene expression and DNA replication." TechnologyReview.com emphasises the urgent need to discover what level of terahertz exposure is safe, but no long-term safety testing has been conducted by a third party. The FDA has never granted its approval for any such devices.



### Important discovery of transients brings gloom

An article in mnn on 20th January commented that "Gloom and doom has hit the world of technology with a recent acknowledgement of the potential hazards from the electromagnetic fields surrounding us all ... Some feel that the discovery of transient dangers could be one of the greatest practical discoveries of the modern era."

### Risks of brain tumours from mobile phones

"Every single study of brain tumors that looks at 10 or more years of use shows an increased risk of brain cancer," says Cindy Sage, MA, coeditor of the international BioInitiative report, according to a msnbc about the dangers of electrosmog on 18th January.

### RF pollution affects adolescents' behaviour

Thomas et al (2009) in a study of 3,000 children and adolescents in Bavaria found that 7% of the children and 5% of the adolescents showed an abnormal mental behaviour. "Measured exposure to RF fields in the highest quartile was associated to overall behavioural problems for adolescents (OR 2.2) but not for children (1.3)." There was an association between exposure and conduct problems for adolescents (3.7) and children (2.9)."

### ELF-MF reproductive dangers

Li et al., 2010, have shown that 160 nanoTesla (0.16 microTesla) significantly reduces male fertility. In a dose-response relationship men exposed for to this level for more than 6 hours a day were 3 to 4 times more likely to have reduced sperm quality. This is the first study to show reduced male fertility from ELF as well as mobile-phones.

### Mobile and Bluetooth male fertility warning

According to Renal and Urology News on 9th November Ashok Agarwal, director of Reproductive Research at Cleveland Clinic, USA, said "We found increased oxidative stress and a decrease in sperm motility," among men carrying a cellphone in their pants pocket in the talk mode while using a Bluetooth device. The findings were presented at the annual meeting of the American Society for Reproductive Medicine in Atlanta.

### Sperm defects caused by phone masts

Yet another study has shown significant sperm defects, this time from GSM phone masts on mice. (Otitolaju AA, et al., 2009)

## Popular Science on electrosensitivity – from telecom engineer to EHS

The magazine Popular Science featured a long article called “Disconnected” on electrosensitivity on pages 54-63 of its March 2010 edition. James Geary highlights the case of Per Segerback, aged 54, who is so sensitive he has to live in a wooden hut in a nature reserve. When he met a friend out walking and the friend’s mobile phone rang, Segerback was overcome by nausea and within seconds was unconscious. Even when a person close by is using a mobile, but he is unaware of it, he can be seriously affected with the feeling that there is “not enough room in my skull for my brain”.

Segerback was once an elite telecommunications engineer for Ellemtel, a division of the Swedish telecom company Ericsson. He noticed his first symptoms, such as dizziness, nausea, headaches, burning sensations and red blotches on his skin, in the late 1980s, after ten years of telecoms research work. Of his research group 18 out of 20 members reported similar symptoms, but his were the worst. The company created a fully shielded office for the six people most severely affected. Other companies faced similar health problems at the same time, but all kept quiet about them. Ericsson even provided Segerback with a specially modified Volvo for transport to work, but commuting became impossible for him in the mid 1990s when phone masts started to appear around Stockholm. He then had to retreat to the woods and is now so sensitive he can feel radar from low flying aircraft.

Segerback misses everyday family life most. He cooks all his meals on a wood-burning stove and heats his house from the fireplace. The 12-volt battery for his electric lights, phone and computer is buried in an underground cellar about 30 yards from his house. His computer and mouse are shielded by metal plates.

In 1993 Ericsson issued a report called “Hypersensitivity in the Workplace”, about the health effects at Segerback’s lab. Ellemtel’s vice-president Orjan Mattsson and Torbjorn Johnson, the administrative chief, wrote: “A new problem in the work environment has appeared: hypersensitivity ... When the first case occurred at Ellemtel at the end of the 1980s we were not prepared. Soon, we came to look upon hypersensitivity as a serious threat to the company business ... We started wondering if we were faced with a modern-day scourge.” In 1999 Ellemtel dismissed Segerback on the grounds that he could not longer carry out his job.

Segerback now admits he and other mobile phone engineers were wrong. “I’m an engineer, and even I don’t know how to design a phone that doesn’t effect health ... Guys like me were so far ahead of society. We didn’t know medicine. We didn’t think what we were developing

could harm anyone. It is hard to admit we’ve been so wrong for so long.”

Ulrika Aberg, a Swedish physician specializing in EHS, who treated Segerback in the 1980s and has worked with over 800 EHS patients, said she has seen a sliding scale of symptoms. These range from sleep disturbance and dizziness to the more severe effects experienced by Segerback. For milder symptoms she suggests removing all wireless devices from the home, such as mobiles, DECT cordless phones, and WiFi internet connections. She reports that there are several hundred EHS ‘refugees’ in Sweden who have had to move house, sometimes several times, to escape the effects of radiation. She removes her mobile phone’s battery when she visits EHS patients.

## Electrosensitivity: a first person perspective

Dr David Fancy, a departmental chair at Brock University, Ontario, has published (scribd.com, 27805764) part of a lecture he gave at Lakeside University, Canada, in February. He has kindly allowed use of it for this Newsletter.

Dr Fancy recounts his own slide into electro-sensitivity in 2001, when he was writing his doctoral thesis using a laptop. “A few months into an intense writing phase, I noticed that my left hand would get sore by the end of the day. Writer’s hand, repetitive strain injury, I thought. Before long however, my left hand was sore earlier and earlier in the day. Why my left hand, I wondered? And why did the soreness go away approximately an hour after I finished typing. And why did that same hand not bother me when I was playing guitar to relax in the evening?”

Soon he could not type at all on the laptop. “Around the same time I noticed slight pain in my chest when I was in front of one of those older CRT or cathode ray tube televisions. A few months after I noticed this, I could only watch television for about an hour before the pain in my chest made me stop. By this time I had installed an external keyboard to the laptop with a USB cable, so I was no longer typing directly over the body of the laptop. After I made this adjustment the pain was entirely gone in my previously sore hand when typing. It became clear that there was some correlation between my increasing inability to watch television, the pain that occurred when I was typing with a laptop, and the whistling in my ear that I started experiencing while speaking on a portable phone. But what was the correlation, the connection between all these experiences?”



On moving to Concordia University in Montreal he was unable to sleep very well in his new apartment. He purchased a second-hand Apple desktop computer with a CRT screen built in it. On the third day in his new apartment, he spent eight hours working on it. "Suddenly, it was as if some kind of switch had flipped in me. I was, seemingly overnight, now unable to tolerate any form of electromagnetic emission without experiencing serious discomfort or pain. I could no longer use a cordless phone. I didn't have a cell phone of my own but could no longer tolerate being in a room when a cell phone was on. The subway made me dizzy and nauseous; I couldn't stand near a toaster, blender, or washing machine; walking under even small power lines that ran along residential streets became an exercise in headaches and rapidly onset dizziness; my extremities became numb when I approached any kind of electrical device. What on earth was going on?"

"I purchased a Gauss meter to measure electromagnetic fields. I discovered a 120 mG (12,000 nT) field over the left-hand side of the laptop, but only a 5 mG (500 nT) field over the right. 120 mG: sore hand; 5 mG hand not sore.

An aha moment. The new apartment I was living in had a 25 mG (2500 nT) electromagnetic field in it. I began doing research and discovered that more than 0.6 mG (60 nT) is bioactive; it generated some kind of effect on living systems. 0.6 mG bioactive, 25 mG ambient in the apartment. 120 mG over the computer. Another aha moment. Did these high levels have something to do with the transformer on the service pole outside my front window? Was this having an impact on my sleep and somehow contributing to the generalized pain and discomfort I was experiencing on an increasing basis? The landlord told me one day about the apartment's previous occupants, a single mother and her child. The child, 3 years old, who had lived in the apartment since she was born, had died of leukemia 6 months previously. The mother had left Montreal to return to France to live with her parents. Was this perhaps connected as well?"

"My own condition became increasingly worse, to the point where I lived in an unheated camper trailer on a 120 acre woodlot outside of St Catharine's for years. At that point I was unable to be anywhere in proximity to wireless, cell signals and just plain old 60 Hz. Although I did not miss a day of work through this entire period, although I generated enough research to receive tenure and promotion, received a SSHRC grant, won a national playwriting prize and a major teaching award, I also spent 5 years in continuous pain, numbness, nausea, and brain fog. I was unable to fly, to drive for more than 20 minutes, and was very socially isolated. I would work on my computer with a 20-foot USB extension cable to



a keyboard and use a data projector on the other side of the room to shine onto a screen on the wall in front of me. Email became an exercise in major pain. And yet with a lot of research, the collaboration of an open-minded MD and 2 very good naturopaths I was able to detoxify, support my immune system, and now am significantly better. I spend a lot of time trying to direct other electrosensitive people to the kinds of resources that they can also use to improve their condition and begin living again."

"And yet, despite these beginnings of change, much more work has to be done.

First of all, and obviously, levels of electromagnetic pollution have to be reduced to biocompatible levels and different technologies have to be developed. That is a no-brainer."

"Only very few places in Canada actually provide anything approximating recognition for electrical sensitivity or acknowledgement that other health complaints may result from exposure. Women's College Hospital in Toronto has an Environmental Health clinic where dozens of people I'm familiar with have gone to be told by the physicians there that they are electrically sensitive. However, when interviewed by the media, these same physicians will under-report the number of individuals they deal with, suggesting instead that they've only seen a handful of cases over the past years. Why this mendacity about the prevalence of the condition? Who benefits from this? Physicians need to be further educated about the risks of electromagnetic exposure, and emergency medical services have to be provided for those suffering from extreme electrical sensitivity. Many people with electrical sensitivity cannot spend time indoors, let alone go to a doctor's office."

"More research needs to be done on the complexifying effects that heavy metals, pesticides, and other pollutants in the human body have on the development of electro-hypersensitivity. A majority of Swedish electro-hypersensitives affirm that the presence of mercury amalgam fillings contributed to the onset of their condition."



## An ES experience - faulty power cables

*Christine Taylor recalls her recent experiences. She would welcome anyone writing to her (Christine Taylor, ES-UK, BM Box ES-UK, London, WC1N 3XX).*

I am 47 years old and suffer with severe Electrical Sensitivity and Multiple Chemical Sensitivity. My mum, dad and I chose to move to North Devon. My mum and especially I became very sensitive to all chemical and electrical products. We did not know we were chemically sensitive before moving. We always ventilate our house well and had never had a problem in the West Country before when holidaying there over the years.

The longer we lived in Devon the sicker we became and my mum and I went to the Breakspear Hospital at Hemel Hempstead for neutralising vaccines. At the time we thought it was caused by radon gas. [Radon is inert and not a conventional gas. Its radio-active half-life is very short and unlikely to be linked directly with chemical sensitivity. – Editor, based on research advice.] We could not stay living in Devon so we chose to relocate to the Suffolk/south Norfolk border.

We moved here in August 2005 but unfortunately health did not improve. There was previously oil central heating which we took out as soon as possible after moving in but it was not a case of take the oil away and all will be well. There was cavity wall insulation (the blow sort) which the previous owner had installed but we did not want, as formaldehyde fumes can last for years. It came out only ten days before moving in. There are moulds here too.

Using a large air purifier is not enough to eliminate all the fumes overnight. I feel the electromagnetic fields from it as well as from the night storage heaters. We had the house up for sale for two years but the housing market was not good at the time. People without ES or MCS will not have a problem here, just as they did not at our previous address, where we were not okay.

It has been a very bizarre experience and not a pleasant one. All people who are ES know what it is like, not being able to tolerate being near to computers, pylons, phone masts, feeling electromagnetic smog in all towns and cities. Libraries have too many computers on in them for choosing a book to be a pleasure. Shops, especially those with fridges, are a problem. Going away or on holiday is a problem trying to find out if there are phone masts or pylons nearby to the accommodation. I have experienced sensations in the body like having insects crawling in the head, limbs like bouncing jelly, skin irritation, intense heaviness and huge painful pricking sensations throughout my body when my health was being damaged. I am also sensitive to pesticides, as we live in a farming area, and the oil pollution - two more things we did not really consider when we chose to move

here. It is very hard sometimes being so sensitive.

I do go out walking every day and try to eat as healthy a diet as I can, although I know I have a certain amount of food intolerance.

All my electro-sensitivity troubles started because of a fault on the incoming electricity supply to my mum and dad's house in Wokingham, Berkshire, during 2001. The specialist from Scottish and Southern Electricity was shocked to find his readings for electric and electro-magnetic field radiation were ten times higher than they should have been for a normal domestic situation. This had been going on for many months, nearly a year, unbeknown to us. It was a terrible experience in the end. It started with many power cuts, even an eight hour one, and was from the cables they put in the ground. Since I left my job in August 2002 our routine has been to go out walking in the morning. Then my mum and I would go back out after lunch in the car somewhere to read the paper, do a crossword, knit, whatever, then walk again. In winter months we would have our hot water bottles with us. Then usually back out for a walk in the evening. Just to get away from our home environment.

Sadly my lovely mum passed away last June from cancer, which started with breast cancer in 2001. Even up to nearly the end we would go out with her in the wheelchair we hired for her. I miss my mum dreadfully because she was just the same. My dad is sensitive to some things but not so severely as I am and my mum was.

Some people say they have never heard of ES or MCS, but I think everyone should be aware of it. I have not worked since August 2002 and I am not sure what to do. Sometimes I feel handicapped because of my sensitivities.



## New ES-UK Leaflet

It's an excellent introduction to what ES is, with notes on its symptoms and causes. Give it to your relatives and friends, or anyone interested.

Copies are available on the ES-UK website and from the ES-UK BM Box address on this page.

## ElectroSensitivity UK

www.es-uk.info

### What does ES-UK do?

- ES-UK runs a helpline to support people with ES, their friends and family, to ensure there is a sympathetic ear to hear individual's experiences and to offer information and practical help, where possible.
- We have information on ES, what it is, and what you can do about it, to enable you to improve your health and persuade others, including your medical contacts, of the reality of your condition.
- We maintain an up to date library of scientific research into ES.
- We have an interactive forum on the website for those people who can use computers, to share experiences and what has helped.
- We send out a bi-monthly newsletter keeping people informed about people's experiences, tips from sufferers about what helps them; information about ES in the workplace and at home; national and international news including new research.
- We do our best to encourage changes in medical opinion about ES, and to lobby for political change re: exposures, appropriate housing, work adaptations and benefits.

### Contact

For more information about ES-UK, write to:  
BM Box ES-UK, London, WC1N 3XX  
tel. 0845 643 9748  
web. www.es-uk.info

ES-UK is an independent charity Registered No. 1103018

ES-UK has the following trustees (T), scientific (S) and medical (M) advisers:-

Michael Bevington (T), Dr Stephen Brooke (M), Sarah Dacre (T), Dr David Dowson (M)  
Doctor Andrew Goldsworthy (S), Doctor Magda Havas (S), Professor Denis Henshaw (T)  
Professor Olle Johansson (S), Jean Philips (T), Doctor Hugo Schooneveld (S), Brian Stein (T), Philip Watts (T)

### Electrosensitivity? What's that?

Electrosensitivity (ES) is a condition which can develop when people are exposed to things like mobile phones, mobile phone masts, powerlines, substations, computers, WiFi wireless networks, domestic wiring, DECT cordless phones and other household appliances.



Please send contributions for the ES-UK Newsletter to:  
**Michael Bevington,**  
**Stowe School, Buckingham, MK18 5EH**  
or email [mbevington@stowe.co.uk](mailto:mbevington@stowe.co.uk)

### Trustees

Michael Bevington (chair)  
Sarah Dacre  
Professor Denis Henshaw  
Brian Stein  
Phil Watts

### Medical Advisers

Dr David Dowson  
Dr Stephen Brooke  
Dr Dietrich Klinghardt

### Scientific Advisers

Dr Andrew Goldsworthy  
Dr Magda Havas  
Professor Olle Johansson  
Dr Hugo Schooneveld

### Aims of ES-UK

1. To help people suffering from electro-sensitivity
2. To educate the public about electro-sensitivity and related areas

### Support ES-UK

A donation of £15 per year, or whatever you can afford, helps with the running costs of ES-UK. Cheques, payable to ES-UK, should be sent to the BM Box shown, with a Gift Aid declaration if you wish and are eligible. You may also donate electronically online via the ES-UK website using the secure Charity Choice button.

### Newsletter

Thanks to Gordon Flavell for typesetting and use of photographs © and to Brian Stein for printing and distribution.



for all people sensitised by electro-magnetic fields and radiation

## ElectroSensitivity UK

can be contacted at the following  
postal address or phone number:

**BM Box ES-UK,**  
**London,**  
**WC1N 3XX**

**Telephone: 0845 643 9748**

Alternatively, if you have access to email,  
the charity can be contacted on the  
following email and web address

**[enquirers@es-uk.info](mailto:enquirers@es-uk.info)**

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