

## “The human brain is sensitive to this electromagnetic radiation” – Dr Volkow on mobiles

Dr Nora Volkow’s important study published on 23rd February is the first to show that 50 minutes’ exposure to a mobile at a maximum of 0.9 W/kg SAR increases brain glucose metabolism at sub-thermal levels in a dose-dependent way (US SAR limit is 1.6 W/kg). There were no changes from static magnetic fields in a MRI of 4T but only from mobiles. The 7% increase was an average over 30 minutes starting 5 minutes after the end of the exposure. According to Medscape this leading US researcher said of her study: “What it does say to us is that the human brain is sensitive to this electromagnetic radiation.”

**Sub-thermal effects, on everyone.** Volkow and her team theorized that the changes were due not to heating but “cell membrane permeability, calcium efflux, cell excitability, and/or neurotransmitter release.” The 47 subjects were healthy, and not already sensitised to mobile phone radiation.

**“Stunning” “dynamite”.** Although it is well established that mobiles affect sleep, the New York Times commented “The new study opens up an entirely new potential area of research ... the question is whether repeated artificial stimulation as a result of exposure to EM radiation might have a detrimental effect.” Other comments included “stunning” by Ronald Herberman, former director of the University of Pittsburgh Cancer Institute, according to Microwave News. David Carpenter, a neurophysiologist and director of the Institute for Health and the Environment in Albany, NY, said “This paper is just dynamite. It’s going to be very difficult to deny that RF radiation from a cell phone does not alter nervous system activity. This work will turn the whole issue around.”

## Wireless smart meter dangers discussed by DECC and DoH

Click Green on 25th January revealed that officials from the UK’s Department of Energy and Climate Change have confirmed “discussions” are taking place with the Health Department over safety concerns regarding the mass installation of smart meters. “Energy chiefs say talks will continue with the Department of Health as worries grow over research linking smart meter technology and an increased risk of cancer.” A DECC spokesman said: “Decisions on the communications requirements for smart meters have not yet been made ... This work will consider the range of issues relating to smart meter communications and the different technology solutions, including concerns expressed by some people about electromagnetic fields and electrical sensitivity.”

## npower: “nothing compels you to accept a smart meter”

A reader has received a letter from npower dated 16th December 2010 stating that “As confirmed, we can assure you that there is nothing in the proposals that compels you to accept a smart meter.”

## Wireless meter protestors arrested in US – “a growing revolution”

On 29th December 2010 two local mothers, Katharina Sandizell-Smith and Kristin McCrory, were arrested in Inverness Park, California, by Marin County Sherriff’s Deputies for blocking a public street as some two dozen residents protested at the imposition of wireless smart meters, according to Peter Pratt in StimulatingBroadband.



Joshua Hart of Scotts Valley Neighbors Against Smart Meters said, “The wireless industry needs to look itself in the mirror and decide whether they are going to follow the tobacco industry’s route of denial and deception, burdening a generation with lasting health impacts or invest in high speed fibre optic, wired and stable connections for our future

telecommunications needs. There is a growing revolution across the country against forced wireless smart meters, and other microwave radiation near people’s homes. Government and industry would be wise to take note.”

Photographs by J. Hart

[More on the health dangers of wireless smart meters on pages 10-14 and 21]

## Late news:

On 10th March California insisted on an opt-out from wireless meters for health reasons.

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## ES-UK conference 2011

Another conference is being planned at Melton Mowbray, possibly on Saturday 24th September 2011, thanks to Brian Stein. Put the date in your diary!

## May “ES Awareness Month”

ES-UK joins the Governor of the state of Colorado in declaring May as “ES Awareness Month”. Make people aware!

## Rally in London

Some groups concerned about EMF health dangers are planning a London rally, probably on Saturday 7th May. This will support the London Resolution, agreed in 2007. It calls on the HPA and the UK government to reduce the safety limits from ICNIRP's 6-minute heating levels to biologically based ones, “reflecting the overall scientific evidence”. Current plans are to start in Hyde Park at 11.00am and then walk to Trafalgar Square for speeches from 12 noon until 2.00pm, but it would be advisable to check first. Everyone can participate, since the current health threat from EMFs affects every person in the UK, not just those with ES or fighting a mast or school WiFi.

## Thank you

Thank you to Gordon, Brian, Elaine and Sarah for all their work in printing, distributing and sending the Christmas cards and sorting payments. It's good to know that the cards were well appreciated. Special thanks to Gordon for subsidising the venture. With accompanying donations it raised a good amount for the charity's funds.

## L'Associazione degli ipersensibili ai campi elettromagnetici.

From Dr Anna Zuccherò, the president of the Italian Association of Electro-Sensitivity, to Sarah Dacre, trustee of ES-UK: “I'm very very distressed by the death of Shirley Ferguson. All my association and I (as a medical doctor) share in her family's and friends' grief and yours. We will continue our work because her death is not in vain.”

Gordon Bates of Horsham, West Sussex, a supporter of ES-UK, has died.

## Shirley Ferguson

*The late Shirley Ferguson from Berwick on Tweed, a few weeks before her tragic death in October 2010, contributed the following letter for publication in the Newsletter, giving her views as an experienced nurse. It is published here as she desired, out of respect for her wishes. We continue to express our deep sympathy for her family and friends in their grief.*

Dear Sir/Madam,

I write, prompted by a paragraph in an article from Filipe Garcia [in a recent Newsletter]. I quote: “God Bless the internet, otherwise I would be confined to a mental institution”.

Well, I wasn't so lucky. On top of being chemically and electrically sensitive, I have an auto-immune condition called Myasthenia Gravis which involves muscle weakness, particularly affecting the speech and swallowing areas. For this condition, a drug called Alendronic Acid is prescribed, to combat the effects of steroids on bones. I've learned to my cost that, on me at least, eyes, head, swallowing, muscles, joints etc. are affected. Overall result? I couldn't face any more, especially with the scepticism of friends and family, and overdosed. I now find myself in psychiatric “care”, labelled psychotic and being treated with a powerful anti-psychotic medication which is more than someone already chemically intolerant can cope with. I am told I am diagnosed as delusional, and if very shaky, or experiencing muscle spasms (or find myself on the floor), I am ignored.

I have now given up in every sense of the word. Despite evidence I've given to the consultant and his team to read, it is given no credence, i.e. they only work within “scientific methods” and, to top it all, I “obsess” about my condition, which is a “somatoform disorder”.

My only support comes from a circle of people who are also E.S.. I admit mine seems a very advanced case, but living for seven weeks under fluorescent lights has not been easy, and does nothing to assist in “assessing my progress” which is measured by how much I am prepared to expose myself to EM forces. Two years ago I was strong, fit, walking miles every day etc.. My life has become so restrictive that my family can't cope and disbelieve me. (They, of course, are desperate for me to get better and believe everything the psychiatric team tell them.) Has anyone else come “back to the land of the living” from a situation such as this? Please let me know.

In addition, this drug has made me extremely photosensitive, producing shakes and convulsions in the extreme, and together with blurred vision, necessitated ophthalmology appointments, to prove I wasn't delusional! You will appreciate just how helpful and productive this was.

Thank you ES-UK. I'm hanging on by my fingertips.

Shirley

## Can you help stop electro-pollution?

Many supporters of ES-UK are already busy informing politicians, officials, employers, doctors and others of the dangers of electro-magnetic pollution. Current issues include:

- give GPs more information on the symptoms and diagnosis of those allergic to electro-pollution;
- encourage research into cell membrane biology and EMFs to help find remedies for this allergy;
- ban wireless smart meters;
- ban WiFi in schools and public places;
- restrict mobile use to designated areas, like smoking;
- create white zones covering 33% of each community area (the proportion of the general population which doctors and scientists estimate is affected by electro-pollution);
- give citizens a right to stop electro-pollution above international biological limits from entering their property.

People also need to be informed that:

- special protection is needed for those already sensitised and other vulnerable groups like children, pregnant women, the elderly or people with immune diseases;
- Professor Belpomme, a leading expert, estimates that 10-50% of the general population could become intolerant to EMFs in some degree by 2035-2060 depending on the increase in electrosmog;
- the EU parliament in 2009 voted that the ICNIRP 6-minute heating limits for an average adult male were “obsolete” and called for biological sub-thermal limits, such as the BioInitiative and Seletun limits;
- the 2007 UN Convention on the Rights of Persons with Disabilities, to which the UK signed up, appears to cover people functionally impaired by sensitisation to electrosmog.

## ES NEWS

### Electrosensitivity – “doctors aren’t trained to recognise the symptoms”

The Metro.co.uk on 28th November 2010 reported on “Electrosensitivity: Is your mobile really a threat to your health?” and asked: “Why are campaigners branding mobiles and Wi-Fi the invisible health threat of the 21st century?” It featured Michael Cohen who suffered major intolerances for 16 years. “It meant I couldn’t be close to electrical cables as I could feel the current in my body if I went too near. When I used a mobile phone I would get a pressure in my ear, and I couldn’t go to London as it would make me ill for weeks. I would feel drained, my energy would be zapped, my sleep would be affected and I’d have headaches and pains in my body.”

Also featured was Sarah Dacre, a trustee of Electrosensitivity UK: “Someone suffering from electrosensitivity can experience a number of symptoms. Doctors in the UK aren’t trained to recognise the symptoms, which is why the illness is often overlooked.” Dr Michael Clark from the HPA admitted that in laboratory tests “scientists have not been able to show cause and effect.”

But Philip Weeks, a natural practitioner specialising in environmental health factors, said that insomnia is one of the biggest effects of electrosensitivity: “This lack of sleep affects our immune systems and our ability to repair and fight infections.”

### Blood Count

Next-up News on 20th January urged people living near a proposed phone mast to have a Complete Blood Count done before and after irradiation, since it claims this would be valid legal evidence which could support action against promulgators of radiation. Changes include a drop in red corpuscles and/or white cells (leucocytes), an increase in lymphocytes, irregularities in mean corpuscular volume and lower levels of haemoglobin.

### Genetic electro-sensitivity?

A mother who was sensitised to EMFs some time ago reports that one of her children, a daughter aged 31, has now also become allergic. She was very unwell when close to an “energy-saving” light bulb which she had not realised was there, and lost sensation in one arm and hand for 30 minutes after moving away from it.

### “Growing Credibility for Electrohypersensitivity Symptoms”

This was the title in Dr Mercola’s article on electro-sensitivity on 12th January. He reported that “it is estimated that 3-8% of populations in developed countries experience serious electrohypersensitivity symptoms, while 35% experience mild symptoms, according to Dr. Thomas Rau, medical director of the world-renowned Paracelsus Clinic in Switzerland. Dr. Rau also believes that ‘electromagnetic loads’ lead to cancer, concentration problems, ADD, tinnitus, migraines, insomnia, arrhythmia, Parkinson’s and even back pain.”

Dr Mercola reported that “for people with Electromagnetic Hypersensitivity Syndrome (EHS), just walking into a coffee shop that is Wi-Fi equipped can be debilitating, triggering a wide array of symptoms including headache, fatigue, nausea, burning and itchy skin, and muscle aches. Some students have to drop out of school or are unable to continue on to graduate programs once they become electrically sensitive, irrespective of their intelligence and capabilities. Even just briefly standing at the post office, or traveling on public transport, can be a debilitating experience for

some people, sometimes taking hours to restore rebalance. Because the symptoms are subjective and vary between individuals, it makes the condition difficult to study, but with the work of Dr. Havas and others, acceptance is slowly growing and the real health effects of EMF are becoming harder to deny.”

### ES - “The emerging health problem of the 21st century’

William Rea, MD, Founder & Director of the Environmental Health Center, Dallas Past President, American Academy of Environmental Medicine, is quoted in Greenberg’s article of 14th February in Explore: “Sensitivity to electromagnetic radiation is the emerging health problem of the 21st century. It is imperative health practitioners, governments, schools and parents learn more about it. The human health stakes are significant”.

### “Electrohypersensitivity - one day soon”

In an article on 16th February Dr Mercola wrote: “Do the words “electrosmog,” “dirty electricity,” “electrical pollution,” and “electrohypersensitivity” mean anything to you? If not, mark my words, they will one day soon.”

### Danger of elevated cortisol levels, raised blood sugar, and hyperthyroidism

*Dr Anne Louise commenting on the Edge on Health blog, of 6th December 2010:*

“I know first hand how electronic pollution can impact health. Like my friend, I also suffered baffling symptoms – mine included a benign parotid gland tumour (one of the salivary glands below my ear) ... I had been addicted to my cell phone! ... The subliminal or “stealth” stress caused by electro-pollution elevates

cortisol (stress hormone) levels. Not only does excess cortisol raise blood sugar levels, creating belly fat and weight gain, but it also uses the body’s supply of the amino acid tyrosine – required to make the thyroid hormone. This results in fatigue, weight gain, and hyperthyroidism.”

### EHS – “significant cognitive and neurobiological alterations”

Langebe M, et al, 2007, found that 23 EHS patients show reduced intracortical facilitation compared with controls, suggesting a nervous system function. Langebe M, et al, 2008, measured cortical excitability and perception thresholds using transcranial magnetic stimulation in 89 EHS and 107 controls and concluded that their results “demonstrate significant cognitive and neurobiological alterations pointing to a higher genuine individual vulnerability of electromagnetic hypersensitive patients”.

### EHS symptoms linked to cordless phones

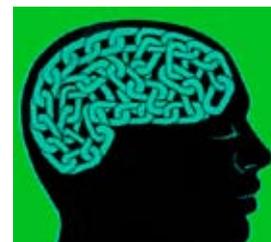
A new study (Havas, M et al, 2010, “Provocation study using heart rate variability shows microwave radiation from 2.4 GHz cordless phone affects autonomic nervous system”, Eur.J.Oncol., with 25 subjects) has shown how cordless phone base stations at 2.4 GHz disrupt cardiac rhythm in some individuals, with marked increases in arrhythmias and other disturbances in heart rate variability in 40% of healthy volunteers. Holistic Primary Care reported: “This is the first objective evidence of cardiovascular effects associated with wireless EMF exposure, and it lends quantitative vindication to the concept of “electrohypersensitivity”, the sense some people have that they become physically ill when close to EMF fields from cell phones, microwave ovens, computers, fluorescent lighting systems, and WiFi networks.”

**Failed subjective perception tests:** Dr Havas noted that “The sympathetic nervous system up-regulated, and the parasympathetic nervous system down-regulated, during exposure, which is the typical “flight-or-fight” stress response. Feelings of anxiety as well as pain or pressure in the chest were associated with the rapid or irregular heart beat among some of the participants tested. This test is objective and directly measures the heart’s response to radiation and is unlike subjective testing, where scientists ask individuals if they know whether a device is turned on or off and then determine their “sensitivity” based on perception of exposure, which is just that perception and NOT sensitivity. It clearly documents that some individuals are hypersensitive to specific frequencies and supports complaints people have when they are exposed to radiation, including a racing or fluttering heart, pain or pressure in the chest, and feelings of anxiety that resemble the onset of a heart attack.”

### Electro-sensitivity account

The Jan/Feb. 2011 edition of Kindred Spirit (pp. 64-66) had an article called “Wired and Tired: what is electrosensitivity?” by Elizabeth Wells. She is a natural nutritionist and health writer, who herself was originally diagnosed with Chronic Fatigue Syndrome but has now become sensitive to mobile phones. Her article covers links with chemical sensitivity, the role of calcium, and the need of some sufferers for chelation of toxins like mercury and the removal of fungal or bacterial growth.

See [www.kindredspirit.co.uk/articles/article-detail/887](http://www.kindredspirit.co.uk/articles/article-detail/887)



### London Transport mast caused ES symptoms

The London Evening Standard on 14th January reported that Bryan Haven, 48, complained that “he had started suffering headaches and nausea and could not sleep” after Transport for London erected a 60 ft bus communications mast outside his home in Streatham. After reporting this to the TfL website and receiving only an automated reply, he had sent some emails which he admitted may have been “a bit spicy”. A court judgement against him last April was overturned at appeal on 13th January. The mast has apparently now been removed.

### Employment and Support Allowance

A useful website is [www.benefitsandwork.co.uk/employment-and-support-allowance](http://www.benefitsandwork.co.uk/employment-and-support-allowance).

## Epilepsy

### – links with mobile phones and masts?

On the Epilepsy Action website are these comments: 9th February 2010: "I am only 36 and had never had a seizure until two years ago. The situation was my wife was in another room and received a call on her cell. I immediately fell to the floor in convulsions; my wife called 911. I was not aware of what happened until we reached the hospital ... I now see an epileptologist. He has diagnosed me with epilepsy and I am currently taking 3 medications ... I still experience seizures more frequently than I would like. Moreover all my seizures are triggered by cell phones. I have never had one without being in the presence of a ringing cell phone. No, it does not matter what the ring tone is. People talking on a cell phone do not affect me, nor does a phone on vibrate (weird), lights do not bother me either. I do not have a seizure with every ringing phone. I do notice that more other symptoms are becoming apparent."

### Indian report: mobiles and masts may cause electro-sensitivity

In the Daily News & Analysis of India, Priya Adhyaru Majithia, in an article headed "Mobiles – friend or foe?" on 2nd January, gave details of a report on Cell Tower Radiation prepared by Professor Girish Kumar of IIT Bombay's Electrical Engineering Department for the Department of Telecom in Delhi. The report notes that radiation from mobile phones and masts is associated with many cancers and also "affects skin and may cause electromagnetic hypersensitivity (EHS). People suffering from this condition report a range of symptoms including biting and stinging sensations; or lesions, rashes or sores. ... Use of the handsets before bed, delays and reduces sleep, and causes headaches, confusion and depression. People living near mobile phone base stations are also at greater risk for developing neuropsychiatric problems as headache, memory loss, dizziness, tremors, muscle spasms, numbness, muscle and joint pain and sleep disturbance."

### Electrical sensitivity to CFLs

Canadian TV Global News 16-9 on 26th September 2010 broadcast an interesting programme showing how Swiss government research has measured the electric fields from CFLs and how these couple with the human body to create induced currents. Dr Havas from Canada then explained how these currents adversely affect people who happen to be sensitive to EMFs. <http://www.globalnews.ca/programs/16x9/video.html?rel easePID=fyXintQJiV62YtNjX442U9E3po1zMWdv>

In contrast, the UK Department of Health in January 2011 refused to include in its lighting advice to NHS property managers a reference to the Swiss Federal Government report on adverse health effects of electric fields from CFLs. Instead the UK Department of Health claimed that "electrosensitivity is a little understood and controversial issue".

## How an employer provides for someone with ES

A Newsletter reader, who teaches in a state school in the UK, reports on how the school provides for someone with ES.

- The school's headteacher explained the nature of ES to the rest of the staff for 20 minutes, and then the ES teacher was invited to add further comments.
- The school has replaced whiteboards linked to computers by WiFi with hard wiring links.
- The school has changed its WiFi system so that each room can be isolated and used separately, so that the ES teacher can be alerted if the WiFi is to be switched on close by.
- The school has a policy of no switched-on mobiles for pupils.
- The Head has asked staff and visitors on the premises to keep mobiles off, although brief use by staff is allowed in their own rooms for, say, checking on a child who is ill. Even visiting police officers are asked to comply with the policy of switching off mobiles on the premises.
- Parents inside the playground at the beginning and end of the day are required to comply with the policy of switching off mobiles. The head applies Health & Safety criteria in this instance so that parents are fully involved in supervising their children and not distracted by talking on mobiles.

### Cars for ES sufferers?

"Our motability car is up for replacement soon, and as buying an old car is not an option with the scheme - and we cannot afford to buy a car ourselves - I need to find out which new cars have the least amount of techno-junk in them. Someone said a while back to us that German vehicles were the best; is this true? As we wouldn't be interested in high-end models with luxury specifications, all the Bluetooth, WiFi, inbuilt Satnav features will hopefully not be standard and can perhaps be disabled if necessary. Any help appreciated."

### Campsite

A supporter recommends a large campsite called Shell Island in North Wales, LL45 2JP (01341 241453) which is said to have no masts, signal or WiFi.



### EHS demand “white zone”

The front page of Le Dauphine on 28th November 2010 featured an article headed “Electro-Hyper-Sensitives demand a “White Zone” free from radiation”. It reported on people allergic to microwave radiation who want official recognition for their handicap. “The EHS live on the fringes of modern society kitted out like extraterrestrials, in order to be protected from the EMR from mobile phones and WiFi”.



To save their health and their lives they abandon home and work and take refuge in “clean” radiation-free areas.

*By kind permission of Next-up News.*

### Beware anti-mice wireless devices!

From the Edge on Health blog, of 6th December 2010.

“Recently a friend complained that she couldn’t lose weight – no matter what she did. A highly skilled massage therapist very attuned to the physical body, this woman had mysteriously put on 30 pounds and also developed a strange growth on her thyroid that even her doctor couldn’t explain or understand ... It suddenly dawned on her that she first began to experience mono-like symptoms of fatigue when her family installed an electronic device to rid their home of mice.”

### Earthing problems?

A reader wonders if anyone else suffers from high magnetic fields owing to a household earthing problem. She thinks the Protective Multiple Earthing (PME) system in the UK has produced high magnetic fields in her new house and these have exacerbated her existing electro-sensitivity. She would be interested to hear from anyone suffering health problems from similar causes. [Please contact the Ed.]

### Banking alerts by post

Sandi Lawrence reports that she wrote to National Westminster Bank explaining about electro-sensitivity and that some ES sufferers cannot receive mobile or email alerts if they are near to their overdraft limits. Nat West telephoned her agreeing to provide postal statements to alert those who are unable to access this information by other channels. This service is available on request.

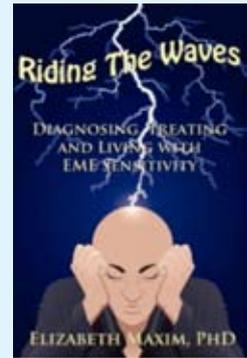
### Early death

A supporter of ES-UK writes: “Recently we were at the funeral of a much loved friend who died at 58 from progressive lung cancer. Even the vicar leading the ceremony said, “With such an early death, there must be questions as to why”. We know they slept next to a DECT phone base and had WiFi installed and he sat next to a WiFi enabled computer all day at work. Five years ago we explained my own electro-sensitivity illness and he stated that “it was rubbish about EMR and that it hadn’t done him any harm”.”

## “Riding the Waves”

### experiences of EMF sensitivity

Dr Elizabeth Maxim has written a book on her experiences of sensitivity to EMFs called *Riding the Waves: Diagnosing, Treating and Living with EMF Sensitivity* (2010, 220 pages, ISBN 978-0615395463, available from Amazon etc.). Dr



Maxim became badly sensitised by an upgrade in mobile-phone masts in April in 2008 but it was not until the summer of 2009 that she realised that she was sensitive to EMFs from the geological fault lines in California where she then lived and that these had caused symptoms since 2000 when she moved there. Her sensitivity to changes in geopathic seismic EMFs has enabled her to predict an earthquake to within 30 minutes up to two days later, just as she is particularly sensitive to EMF changes before thunderstorms. She recounts the difficulties of diagnosing the cause of her sufferings, although her scientific and medical training was a major help. She was an IT industry consultant for 20 years and then became an alternative practitioner, while her husband is an electrical engineer and their friend is a mechanical engineer.

Her story includes comments on the nature of EMF sensitivity and possible remedies, other than the basic need for physical removal from the EMF source causing the trouble. She finds copper and silver bracelets and chains especially helpful in relieving her EMF symptoms, but stresses the idiopathic nature of the condition and how problems and solutions for her may not apply to others who are sensitive to different frequencies and pulses. In particular she and other scientists were able to show how different EMF sources, in the form of WiFi and speaker amplifiers, combined to cause her problems, whereas she did not find them harmful individually.

Dr Maxim suggests that EMF sensitivity may be associated with sensitivity to sound and similar to other modern conditions, such as ADHD, CFS, Fibromyalgia, SAD and histadelia, but differentiates it from Chemical Sensitivity. She also notes how high levels of EMF can interfere with homeopathic remedies and meditation techniques, and refers to some of the studies showing how animals also respond to changes in EMFs produced by earthquakes and thunderstorms.

## David Newell

On 10th November 2010, David Newell, aged 48, died just opposite the Orange phone mast he had opposed, in spite of help from the emergency services, according to Next-up News. He had severe heart problems. David Newell ran a company in Cambridge, but from the early 2000s he became unable to tolerate physically the microwave radiation from phone masts. His children also started to suffer from chronic migraines. He began to have very serious heart problems that required hospital stays and operations. Doctors told him that if he wanted to stay alive he had to escape immediately to live in a cleaner environment. He found a secluded house for sale in the country in Saint-Papoul in the Aude in southern France, a village of 800 people. The Newell family became very involved in village life.

David started to enjoy life again with his wife and three children, until 2004 when Orange decided to erect a mobile phone mast in the village. The water tower was chosen, since it was more than a kilometre from the village. The mayor approved the plan and the rest of the inhabitants were assumed to do the same, but the Newell family lived close to the site. From that moment on David had no more choice; he knew that if he was irradiated his days would be numbered.

He started a campaign ([www.saintpapoul.com/](http://www.saintpapoul.com/)) to save his life, suggesting another site where there was already an army radar station. This was rejected. His house would receive maximum doses of radiation, being tens of meters away from the mast and in a direct line to the village, meaning that the radiation beam passed directly above it. Work on the site was disrupted and sabotaged several times. Bruno Cazali, regional director of Orange said: "It's a unique case. We've never encountered anything like it elsewhere, even in the northern suburbs of Marseille there hasn't been any vandalism like it." Ten police officers were involved and called for ten more from the riot police, resulting in a violent clash and Charlotte, David's 14-year-old daughter, being taken to hospital. Faced by David's unprecedented determination, Orange, struck a deal with David via the Mairie and the Gendarmerie, as follows: "The company Orange France offers to alter the azimuth [of the beam] that passes above the house of Mr David Newell, on condition that he does not commit any more acts of vandalism on our mast. This is simply a gesture of goodwill on the part of Orange France and does not support in any way the hypothesis of the dangers of wireless radiation."

However the harassment continued in another form and David was taken to court in Carcassonne and heavily fined. Exhausted by his single-handed struggle David's spirit was broken and the tragic outcome seemed inevitable. "To his wife Rachel, his older son David, his two daughters Charlotte and little Nicole, all the members of the Conseil d'Administration of Next-up Organisation present their most sincere condolences and wish them much courage."

## READERS' COMMENTS

### WiFi effects

As an addition to his experiences in the last Newsletter, Dr Andrew Tresidder reports: "A recent trip meant that I spent the best part of three days in a WiFi-enabled hotel in a city, and was unable to get out from it much. Interesting.... First the strange dull headache, then the slight irritability, then mild fatigue. Also, presumably due to the duration, or the intensity, of the exposure, a tingling in my lips and metallic taste, and a sensation in the front of my mouth, as well as a runny nose (not the same as a cold), which lasted a few days."

### Light sleep

A reader writes: "Do fluorescent lights and CFLs make people sleepy? I have felt this myself and seen other people appear to suffer this effect even though they are not especially sensitive. I also find my eyes go blurred under CFL desk lamps."

### BT Home Hub illnesses?

A reader asks "Has anyone noticed if families with WiFi and cordless phones like the BT Home Hub have more illness than those who don't? Especially 'flu-like bouts and long-lasting coughs?" He happened to develop a sudden sore throat for several days while staying in a WiFi environment over Christmas, but it disappeared when he left.

### Norovirus and mobiles

A reader wonders whether norovirus is more virulent in people with immune systems weakened by using mobiles a lot – this seemed to be true in a recent localised outbreak. It might also explain its repeated occurrence in cruise ships where the metal structure could increase the reflected radiation from mobiles already operating at increased power if distant from masts.

### Why no smart meter freedom in US?

A supporter was horrified by the reports from California that everyone was being forced to have wireless smart meters. He asks "Why has the US abandoned individual freedom? If the Netherlands gives people free choice and Italy has wired meters, why does the US want to torture EHS people by refusing choice?"

### Blackberry off, but not off?

A reader comments: "Someone switched off their Blackberry mobile and left it on a table about a metre away from me. A few minutes later I felt a sharp electro-sensitivity pain in the lower back. Presumably the Blackberry was still talking to other mobiles or a mast. Why can't Blackberry make their mobiles turn off completely?"

## Active alarms sensors – “it was right to have them removed”

Dr Andrew Tresidder reports:

At work, when the building was extended, we changed the alarm sensors from passive to active/passive. By the end of the first day I had a headache and felt irritable – but it took a few days for me to realize that the new sensor was the cause. Removing it made me feel better in my room, but I became more and more fragile in the rest of the building, to the point that I had to leave meetings after half an hour. So we had the whole building changed back to passive sensors. A week later, several of our receptionists said to me how much better the atmosphere felt, and one senior colleague stated “I’m not sure I did believe in this, but I have to say I feel much better, and think there is something in it now – it was right to have them removed”.

## Distances – 25 yards

A very sensitive reader reports that they have a notice at the gate requesting that visitors switch off their mobile officials. When two officials complied, she could feel the difference 25 yards away.

## Distances – 2 miles

Another very sensitive reader reports that she can feel an aircraft approaching up to two miles away. [Perhaps ground radar? – Ed.]

## Wireless key fobs

A supporter reports suffering a sudden unusual headache while waiting for a child after school. A quick look around revealed a man standing a few feet away continually pressing his car wireless key fob.

## ES and Healthy.1

*This is the first article in a new series by Patty Hemingway. (The views expressed here are the author’s, not ES-UK’s.)*

In 2006 I was trying to understand why I felt so ill, and what I could do about it, so using what I already knew as a practitioner of complementary and alternative medicine (CAM), I did my own research into treatments and ways that people who were electrosensitive could overcome this problem. I came up with a five point action plan, which is still relevant today:

- 1) Shield and protect from EMR.
- 2) Identify and eliminate stress and find ways to relax.
- 3) Check your diet and environment for allergens, and then take action to eliminate these.
- 4) Take the right nutritional supplements to reduce stress and inflammation in your system, and make good any deficiencies in essential nutrients. Remember that these will vary from person to person.
- 5) Get treatment from a practitioner who understands about energy medicine and vibrational remedies to enable your system to go back into balance. (see “Homeopathy in Practice”, Summer 2006, Lifescape, April 2007)

Five years later, the e-smog is denser, and more people are being affected, but these are still principles worth acting on, and when I look at treatment protocols from medical and CAM practitioners, these steps are repeated time and again.

Maybe you have been trying out

different approaches for yourself, or maybe you just don’t know where to start – after all it seems such a difficult thing to do when people are constantly telling you that the problem is one you “invented”, and unsympathetic or unknowledgeable GPs query your sanity – or maybe you just feel stuck. Well, the good news is that this page is dedicated to helping you achieve your health goals. You are invited to write in with your queries about health issues, and I will do my best to respond. You will find details of where to send your questions at the end of this article, and if you want to find out more about me, my website address is there too.

I would like to begin with a question that I am asked a lot:

**Q How can Complementary and Alternative Medicine (CAM) help with ES? If ES is a medical condition, then surely it needs to be treated by a medical doctor?**

The answer is that any practitioner can help with ES, and right now there are not enough medical doctors who understand ES or how to treat it. Even in Germany, the home of the Freiburger Appeal, which was first circulated in 2002 and has now been signed by over 2,000 medical doctors, ([www.emrnetwork.org/news/IGUMED\\_english.pdf](http://www.emrnetwork.org/news/IGUMED_english.pdf)) and the low radiation telecoms products such as the Orchid DECT phone, a recent study has shown how little help doctors were able to give patients who reported symptoms due to EMR (The Views of Primary Care Physicians on Health Risks from Electromagnetic Fields, [www.aerzteblatt.de/int/article.asp?src=sea](http://www.aerzteblatt.de/int/article.asp?src=sea)

[rch&id=79257&p=radiation](http://www.aerzteblatt.de/int/article.asp?src=sea&id=79257&p=radiation))

ES-UK is fortunate in having the support of several doctors who can help, such as Dr Tresidder, whose excellent ES Story featured in the December issue of this Newsletter, but we are going to need CAM practitioners working alongside medical doctors to provide care for the vast number of people now affected. This is often referred to as “Integrated Medicine”, which puts YOU right at the centre of any treatment plan.

Imagine if you were able to see the right specialist to achieve each of the 5 steps outlined above? Well, by selecting your practitioners on the basis of their expertise, this is exactly what you can do. To relax you may prefer to visit a yoga class rather than sit in a doctor’s waiting room. To understand about shielding and protection from EMR you will need to find an expert who can advise you, and it is unlikely to be your local GP. In the German survey quoted previously, the most common advice from GPs sympathetic to ES sufferers, was to move house! We all know that is unlikely to be a permanent solution, as e-smog is unavoidable wherever you live nowadays.

When Dr George Carlo introduced his treatment protocol at an ES-UK workshop at The Friars in September 2008, he explained that he required his clients to live in an environment free of EMR (step 1), he began with a programme of stress elimination, or nervous system balancing

(step 2), he treated with nutritional supplements (step 3), and he used other modes of treatment as appropriate for the individual such as cranial osteopathy (step 5) or allergy testing and elimination (step 4). Please contact me if you would like a report of this workshop.

So how can you get started using the 5 steps? Here are a few self-help tips:

1) Get expert advice about eliminating EMR from your house and from your life. It is especially important to sleep in an environment free from radiation so have a look at the guidelines drawn up by Dr Dietrich Klinghardt, for how to create a Sleeping Sanctuary, which is important because he believes that 80% of the damage to your system comes from exposure to EMR in our own living environments. (<http://emf.mercola.com/sites/emf/archive/2009/07/23/creating-a-sleeping-sanctuary.aspx>). He advocates switching off the fuses at night, thereby disabling all equipment on standby and all sources of EMR while we sleep. Another group concerned with safe buildings and healthy homes, Bau Biologie recommends similar actions, <http://buildingbiology.net/> You can get clued up about shielding, wiring, grounding and other such topics through reading, "The Powerwatch Handbook" by Alasdair & Jean Philips, or "Radiation Rescue" by Kerry Crofton. If you need personal protection then contact Gary Johnson and get yourself a Light Images pendant or device. Gary is happy to advise and will provide products for a trial period if you are not sure. He also runs workshops explaining more about EMR, how it affects us and what we can do to protect ourselves. (Tel: 01787224377 or [www.garyjohnson.org.uk](http://www.garyjohnson.org.uk))

2) Stress comes from various sources: negative emotions, physical trauma, mental distress, or chronic illness, but your body responds in the same way, and can tip into dis-ease as a result. People with ES are usually affected by stress in some form, and this can act as a block to recovery. If you are happy to work on this on your own then you need a guide book, such as

the excellent "Conscious Medicine" by Gill Edwards. If not, then find a counsellor, or therapist who can help. Gill explains clearly how different therapies work.

3) Checking for allergens can be done using muscle testing, as in Kinesiology or via laboratory tests, which usually involve taking a blood sample. A kinesiologist will establish what your system is intolerant of and give you a treatment plan to deal with this, which may include nutritional supplements, dietary advice and vibrational remedies. Ask friends to recommend a therapist or consult one of the professional registers (there are several) to find a registered therapist. Most blood tests need to be ordered by a medical doctor, and Acumen Laboratories provide an excellent service for people with ES who want to find out what other chemical allergens may be contributing to their condition. When I was tested, and I discovered I had a sulphite allergy, it meant no more red wine (or maybe just the occasional glass of an organic wine with no added sulphur!) but the improvement in how I felt was well worth the sacrifice. (Acumen PO Box 129, Tiverton, Devon, EX16OAJ )

4) Nutritional supplements are needed where you are trying to reverse a metabolic imbalance of some sort, or make up for a deficiency. You would be advised to seek advice from a Nutritional Therapist, Kinesiologist or Naturopath to find out exactly what your individual requirements are. If that is impossible then you can find help on the internet on sites such as Dr Mercola or from Patrick Holford, who has also written numerous books and articles. This information will help you identify what it is that you might be deficient in, or where your system is out of balance. Key nutrients for the immune system include vitamin C (everyone needs a daily supplement as the body cannot produce this); vitamin D which we get from sunshine (most people in the northern hemisphere are deficient); pro-biotics which help with digestive health and general immunity; fish oils or omega 3 supplements, which act directly on the cell membrane, which anyone with ES will appreciate is

essential for cell to cell messaging; and antioxidants since these are depleted by stress and radiation.

5) Energy medicine is discussed in Gill Edward's book (see above) and is the term used for therapies that work directly on the body's energy system either through manipulation of energy pathways and meridians, or through dosing with remedies which change the body's vibrational frequency. If you want to find out more about homeopathy or Emotional Freedom Technique (EFT) then please visit my website, or look up a practitioner on one of the professional registers ([www.aamet.org](http://www.aamet.org) or [www.associationnaturalmedicine.org.uk](http://www.associationnaturalmedicine.org.uk)). If you want to get started you will find plenty of books which explain how different therapies work, but it may be difficult to achieve long lasting effects in chronic conditions, unless you work with a practitioner. Various types of flower essences will help in a crisis, and many have blends which address the problems of EMR. Look for Australian Bush Flower Essence, Electro Essence drops, or Alaskan Essences Guardian environmental protection spray.

I look forward to hearing from you and I hope that this information will help you achieve better health over the coming year.

Patty Hemingway ([www.pattyhemingway.com](http://www.pattyhemingway.com)). Write c/o ES-UK, BM Box ES-UK, London, WC1N 3XX.

Electro-magnetic radiation Workshop with Gary Johnson, 10am–4pm, Saturday 19th March, and Saturday 26th November, 2011. Rayleigh Essex. Including: Electro Hypersensitivity; Symptoms and Signs of EMR illness; EMR protection; Treatment Programmes. For more information tel: 01787 224377



# DANGERS OF WIRELESS SMART METERS

CONTINUED

## Refusing wireless smart meters – insist on wired

A growing number of people in the UK who suffer electro-sensitivity have told the Newsletter editor that they have refused or will refuse to have a wireless meter on their premises. This appears to be the most appropriate action and complies with best medical advice, namely that such people are most helped by the removal of all sources of harmful radiation. Other people who are not yet sensitised, including those with scientific and medical expertise, have also said they will refuse wireless meters based on the majority view of scientists that chronic low-level radiation has adverse biological effects and the vote by the EU parliament in 2009 that the 6-minute heating safety levels of ICNIRP are now obsolete.

It should be noted that some so-called “smart” meters being tested at present in the UK are simply remote reading devices with a data report each day; they are not “smart” in the sense that they help to reduce energy usage. This is apparently true of some British Gas remote gas readers which are limited in capability because they have to rely on a battery lasting 10-15 years. ES sufferers should insist on meters with wired data connections both to the utility company (local area network - LAN) and within the home (HAN). Some reports suggest a WiFi HAN might transmit every 10 seconds and the LAN every 5 minutes, but the actual LAN rate could be much higher, depending on the configuration of the local mesh network.

## Wireless smart meters – Energy Retail Association “alternative solutions”

A reader has received a letter from the Energy Retail Association dated 8th October 2010 stating that “We are aware of certain groups of energy consumers for whom wireless smart meters may not be suitable ... Whilst we cannot guarantee that the specific needs of every group of consumers can be catered for, we do anticipate that there will need to be alternative solutions to wireless technology under certain circumstances.”

[Readers may wish to keep writing to their MPs, MEPs, the Minister for Health, DECC, Ofgem, Ofcom and all those concerned. Few if any in government seem to have grasped the major health

problem of neighbours’ wireless smart meters for someone already allergic, and the lack of control on the ever increasing electrosmog from numerous sources. This is a crisis for many people already sensitised and appears to be a denial of their rights to enjoy a healthy life and a denial of their rights to stop other people and companies invading their property, living space and public spaces with harmful pollution. – Ed.]

## Opt-out from wireless smart meters

Under the Disability Act and UN Convention of 2007 it is questionable whether a utility company has the right to cause greater functional disability to someone who suffers from electro-sensitivity, a condition defined as “disabling” by the World Health Organisation. Some police in cities in the US have agreed to help citizens prevent utility workers installing radiation transmitters against the wishes of property owners. Other countries have made transmitters optional and allowed cable smart meters or traditional reading of meters. This is a key concept of liberty. No one in the UK should be forced to be irradiated against their will by a transmitter installed by an outside company on their own premises. The government recommends children should not use mobiles except for emergencies for health reasons, and the peak electric fields of mobiles when used correctly can apparently be lower than those of wireless smart meters.

## DECC takes over from Ofgem in smart meter rollout

An open letter of 9th December from Charles Hendry, Minister of State for Energy, and Lord Mogg, Ofgem chairman, explained that the Department of Energy and Climate Change would take the lead from phase 2 in the implementation of the smart meter programme. The letter omitted the crucial issue of health dangers from wireless radiation exposure, despite these concerns being made known to Ofgem and the government. Nor did it refer to the EU Parliament’s 2009 vote that ICNIRP thermal safety guidelines are obsolete and that biological radiation safety levels are needed.



## Mothers block wireless meters

An article in North Bay on 9th December 2010 reported that a mothers’ demonstration blocked trucks from leaving PG&E’s Rohnert Park wireless smart meter installation yard and later shut down the company’s Santa Rosa customer service centre for 3 hours. They demanded an immediate halt to wireless smart meter installation, full disclosure of the microwave radiation emissions from the meters, and hearings at the state level on the health impacts of the meters. Many PG&E customers are reporting headaches, dizziness, nausea, tinnitus and heart palpitations that began when the new wireless meters were installed.

While PG&E claims that the meters are ‘only 1/6000th the amount of radiation of a cell phone,’ independent experts measuring the radiation say the meters put out powerful pulses 2-15 times per minute that are between 2 and 3 times the strength of cell phones, which are being linked with brain tumors and other health impacts. Joshua Hart, Director of Stop Smart Meters! apparently said, “PG&E has been using time averaging in a slick attempt to hide the real strength of this radiation” which comes in intense spikes, unlike the continuous waves from a cell phone or WiFi router.

## Utilities bully customers over wireless smart meters – “pure evil”

A First Do No Harm blog on 12th November 2010 tells how Wisconsin utility companies are bullying customers over wireless smart meters, even those who suffer health problems from these wireless transmitters. This is described as an “outrage”. Moreover they have not yet been proved biologically safe for anyone. Current federal standards are “grossly out of date”, since they are based solely on heating effects, not chronic biological effects.

Mardie Barbieri of Cascade told We Energies not to send anyone since she did not want a wireless meter. In fact the company sent three people, “and the last one was a large thug. He said they sent him due to his size and being thuggish. He was going to intimidate me, and I said, ‘Honey, no, no, no. You’re here to do a job, and I appreciate the effort, but I will not be getting the meter.’” She had been house-bound for years with MS, but her MS symptoms cleared about nine years ago when she updated her home wiring and fitted Stetzer filters,

amazing her neurologist. Her children's health improved too. She padlocked her electric meter and put up a dog fence, but We Energies then threatened disconnection. "I did everything in my power to protect my family."

Waterloo farmers Catherine Kleiber and her husband Dan, aged 37 and 36, padlocked their meter (photograph). She has recovered from CFS by reducing EMFs on their home wiring. He is a type-1 diabetic and his blood sugar levels go crazy with microwave exposure. They volunteered to report readings from the existing meter but We Energies refused and insisted on installing a wireless meter on their property or disconnecting them.

"Dawn Jones", a 58-year-old disabled woman in the Milwaukee area has also padlocked her meter. At her previous house We Energies ignored her sign and on hearing a noise she went out to find the man leaving who refused to give back the original meter. She was told to call We Energies but "The guy there said the meter's not making you sick. And I said, yes, it is making me sick. He said you're one in a million. I said did you test a million people to see if they'd be sick?" Another utility representative told her that if she got a letter from her doctor she could have the old meter back, but when she returned with her doctor's letter, they said, "Forget it."

At a meeting on 24th May Senator Glenn Grothman told the two We Energies representatives that they must have a plan for people who cannot tolerate the wireless meters, but the reps insisted the wireless meters were safe for 100% of people. Those made ill from wireless transmitters pointed out that 100% of people cannot eat peanut butter or seafood and asked what the company was going to do for the 2% who suffered from wireless meters. When asked for how long they had tested the wireless meters on people, the reps did not reply. Representative Andy Jorgensen challenged the two reps: "So, you can let them keep their old meters. What you're saying is you won't." According to Jones they said, "Well, yeah." "We're looking at pure evil," said Barbieri.

Jayne Shirky, a 28-year-old teacher from West Salem, became ill after moving to the Sparta area. She suffered many more colds and

flu, aches, not sleeping and being unable to finish a sentence. Doctors diagnosed fibromyalgia or an autoimmune disease, but following a tip from a colleague she used clean electricity filters to get off all the sleeping pills, anti-depressant drugs and pain killers within two or three days. But as she healed she became worse near her cordless phone and microwave oven. But she also suffered from a nearby mast and wireless meter signals being picked up by the wiring ductwork like an antenna. She moved to her new house but after a few weeks she suddenly felt ill again, and then discovered that Excel Energy had changed the meter to wireless. Excel Energy told her they would remove the wireless meter if she got a doctor's letter but Ray Grover, the Director of the Project for Automation, rejected the letter from her midwife because it was not by a doctor and then told her that they wouldn't in fact remove the wireless meter: "You're just kind of out of luck."

David Stezter, the electrician from Blair, says he gets ten or more calls every day from desperate folks. He reported that one woman in the Chicago area covered her wireless smart meter with aluminium foil to protect her family. "When the city threatened to sue her, she said, "Go ahead," since it would get them into court a lot faster than if she sued them for installing a dangerous device in her home. The city has not sued because it would suffer too much publicity. For now, they come to remove the foil and get their reading when they need to. As soon as they leave the foil goes back on."

Stetzer compared this microwave radiation to people sitting in the sun: some burn quickly, some don't, but everyone is at risk. The potential costs of this dubious radiation are staggering: (a) the sheer human suffering of people as guinea pigs, (b) the eventual cost to replace wireless meters, and (c) the cost of inevitable litigation. The obvious solution is to legislate against dangerous wireless meters and meanwhile allow people to opt out.

#### **Opt-out for wireless smart meters**

Assemblymember Jared Huffman is introducing a bill that would require the California Public Utilities Commission to provide a wired opt-out for consumers of PG&E's Smart Meter programme.

#### **"Allow opt - outs"**

An industry-based article by Peter Pratt in StimulatingBroadband.com. was sub-headed "Should the Wireless Sector be Concerned with increasing EMF Militancy?" He argued that "wireless carriers and equipment manufacturers will be paying closer attention in 2011 to how smart meter deployments may become, surprisingly to many of us, drivers of an elevated concern with EMF issues by some U.S. consumers. We think the smarter utilities and regulators will be doing the same. We think that's a good thing.

... When fellow Americans, no matter how few and no matter how vilified, are going into the streets to get arrested about something our industry is doing, is that really a good thing for us? ... Let's drop back and listen, do some more studies, allow opt outs when necessary."

#### **Wireless smart meters may violate FCC rules**

EMF Safety Network on 14th December 2010 reported that PG&E Smart Meters may violate one or more of the following FCC conditions which apply to some meters:

1. Antenna(s) must provide a separation distance of at least 20 cm from all persons;
  2. Antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter;
  3. End-users and installers must be provided with antenna installation and transmitter operating conditions for satisfying RF exposure compliance.
- It is alleged that some meters are accessible within 20 cm by some persons, or placed in banks of meters, and some end-users or customers have not been trained in radiation exposure compliance.

#### **Wireless smart meters and legal rights in the US**

The following report was posted on 25th January on Stop Smart Meters from a resident in Texas. The installers "Oncor showed up with no notice whatsoever, came through a locked gate with 'no trespassing' signs, and had no identification displayed on them, as required by law. When I escorted them off the property, they called the police. Five cops showed up and tried to bully and intimidate me. They tried to make me think they could force me to let workers on my property. They bragged that I would

have my electricity turned off (in a nanny-nanny-boo-boo kind of way). Fortunately, I knew my rights and I knew that 1) the Public Utilities Commission (PUC) rules didn't allow for disconnection of service under those circumstances and 2) the police didn't have any legal authority to do anything. I politely wouldn't answer any questions and even though they tried abusive language, threatening body language, etc., I stood my ground and they left without incident."

### San Francisco – “regulators and legislators asleep at the wheel, drugged by donations”

A report on Stop Smart Meters of 21st January stated that high-power boosters are planned for wireless meters in basements in the centre of San Francisco, where high-rise buildings will otherwise block the signal. The SUNDS program (Subterranean Network Deployment System) “means that radiation from the smart meter system is likely to be considerably stronger in San Francisco than elsewhere. An anonymous source at PG&E tells us that the SUNDS program involves boosting the antenna power from 1 to 6 watts, which would mean another potential violation of FCC limits. This really is the wild west with regulators and legislators asleep at the wheel, drugged by donations as the car accelerates toward the cliff.”

### Wireless smart meter readings – dangerous levels

Houses in Stratford, Ontario, have very high readings, such as over 2,000 microW/m<sup>2</sup>, with many pulses a minute, compared to a possible electro-sensitivity symptom threshold level of about 10 microW/m<sup>2</sup>. See: [www.youtube.com/watch?v=uRejDxBE6OE](http://www.youtube.com/watch?v=uRejDxBE6OE)



### Sage Report (2011) on Wireless Smart Meters – numerous predicted safety violations

The Sage Report predicts numerous FCC violations, especially from multiple meters on a block of flats, a hub meter, looking directly at the meter, or near reflective surfaces, such as kitchens lined with cupboards with metal doors. Measurements were taken at 11” for the other side of a bedroom wall and 28” for the other side of a kitchen cupboard. It notes the need to allow for all the other electrosmog. There is special discussion over spherical parts of the human body such as the eye balls and testes which are known to absorb more EMR than other parts and are the reason the US nearly reduced its exposure limits in about 2001.

The Sage Report (Sage Associates “Assessment of RF Microwave Radiation Emission from Smart Meters”, Santa Barbara, CA, 1st January 2011) includes seven key factors for biological safety limits for wireless smart meters. <http://sagereports.com/smart-meter-rf/> [Summary by Ed.].

**1. Multiple antennae in each wireless meter.** Each ordinary wireless meter has one antenna of each type, the LAN at 915 MHz and the HAN at 2.4 GHz. Both antennae can transmit at the same time, so their effective radiated power is summed for power density, with a combined limit of 655 microW/cm<sup>2</sup>. For the house meters with a third internal antenna as a collector or hub meter, the combined limit for time-averaged exposure is 571 MHz, since the additional antenna is 824 MHz which has a lower limit than the 915 MHz and 2.4 GHz frequencies, according to the Sage Report, giving a limit of 571 microW/cm<sup>2</sup> [5,710,000 microW/m<sup>2</sup>].

**2. Reflections.** The Sage Report relies on Hondou et al (2006) to argue that reflections are a major factor in domestic exposure, reaching 1,000 or 2,000%, rather than some arguments for only 60 or 100%. These can include metal surfaces and fittings in kitchens, walls and metal structural components in the house. Thus a hot spot 4.6 m from an antenna could have the same intensity as 0.1m from the antenna, because of localised reflection, giving an increase of 2,000% over predicted free boundary readings.

**3. Variable duty rate.** Wireless smart meters usually operate on a low duty rate, estimated at 1, 12.5, or up to 30%. This duty rate is uncontrolled in a mesh network, so there is no way of knowing how often a particular wireless meter is transmitting except from continuous measurements. In addition, since wireless meters could develop a fault and operate continuously, safety limits should allow for continuous operation, however rare this may be. Continuous operation is a duty rate of 100%.

**4. Time-averaged pulses.** FCC regulations, however, at present allow wireless meters to be assessed on an averaged low duty rate, reducing individual pulses considerably. Yet individual pulses might exceed even heating, as well as biological, limits.

**5. Environmental electrosmog.** In addition, electrosmog from other domestic and external appliances could easily raise the ambient RF levels beyond safety limits. Some utilities, regulators and governments have not yet begun to address this growing problem.

**6. Multiple meters.** For a block of flats there can be banks of many tens of wireless smart meters. Despite their close proximity they will still transmit at full power, and may add to existing electrosmog such as individual WiFi, wireless alarms, mobiles and masts.

**7. Location of meters.** If a wireless meter is on the other side of the wall from where a child's head is in bed, especially if it is a hub meter, the dangers of radiation exposure are much greater than for some other locations.

The PG&E gas meter is apparently a Star Hexagram operating in the licensed band of 450-470 MHz with a range of at least 1 mile. One of the UK types of wireless meters, BT's Arqiva concrete-penetrating system, operates at 412 MHz. It is being trialled in 80 km<sup>2</sup> around Reading as part of Smart Reach, formed with Detica. Meanwhile CE Electric, sponsored by British Gas and EA Technology, is trialling their system in the north of England.

### Wireless smart meter measurements

There appear to be few if any measurements available for wireless smart meters in the UK. In the US, PG&E in California reportedly use a wireless electric meter by Silver Spring Networks for Neighbourhood Area Network (NAN) at unlicensed 902-928 MHz band at 30 dBm, and for Home Automation Network (HAN) ZigBee at 2.4 GHz at 20-23 dBm (200 mW) at 1.6 W (1.8 W maximum).

In comparison a typical WiFi laptop or router at 100 mW is 15-20 dBm and Bluetooth class 3 at 1 mW is 0 dBm. A typical mobile radiating at 500 mW is 27 dBm, but receiving signals may be -90 to -70 dBm. Power is doubled for each 3 dBm increase.

### Wireless smart meters – “industry” report

A report by the Californian Council on Science and Technology called “The Health Impact of Radio Frequency from Smart Meters” published in January 2011 shows that a wireless smart meter is 40 times more powerful than a WiFi router at 3 feet if it is always on, although this 100% duty cycle rate is unlikely and 10-30% may be more typical of a battery of meters, as in a block of flats. The Report undertook no new measurements itself but relied on mainly industry-sponsored reports for measurements.

The Report appears flawed, since it failed to assess the safety of wireless meters based on the international safety limits established by the BioInitiative Report of 2007 or the Seletun statement of 2011. It failed to assess meters based on sub-thermal effects, since it claimed that “scientific studies have not identified or confirmed negative health effects from potential non-thermal impacts of RF emissions such as those produced by existing common household electronic devices and smart meters”, despite studies such as the recent one on cordless phones, a seemingly common household electronic device, which appears to identify and confirm an apparently negative health effect, while a recent study has shown brain changes from mobiles. Part of the problem is that the Federal Communications Commission classifies wireless meters as devices used more than 20 cm from the body. Unlike mobiles which are required to

meet SAR standards, smart meter radiation can be averaged over time, taking into account the maximum emissions during each transmission. Many cell biologists, however, argue that it is the intensity and shape of the pulse, and not the time-averaged power density, which correlates most closely to tissue damage and therefore the FCC assumption is flawed.

Nevertheless, its main consideration included: “4. Consideration could be given to alternative smart meter configurations (such as wired) in those cases where wireless meters continue to be concern to consumers.”

### Wireless smart meters health dangers - “generating a lot of buzz”

Dan Cassidy on 9th February reported in the Naperville Sun that proposed bill of rights by the Naperville City Council “doesn’t address health concerns”; Lisa Rooney of Naperville said that this is a “key component that needs to be added. If the (meters) are installed and residents experience health concerns, such as headaches ... there doesn’t seem to be any recourse,” she said. She said some people seem to be “electro-sensitive,” and are affected more than others by the use of wireless technology such as cell phones and other devices. She believes the meters could aggravate those problems. “I think with any emerging technology (such as smart grid) that we should be proceeding with caution, and allow people choices on how much technology they use,” she said. She would like to see residents able to opt out of the system for health reasons.

Sue Storm of Naperville said she has sensitivity to radio frequency transmissions. She said it is almost like an allergy. When she is around the transmissions she can get headaches, ringing in the ears and other symptoms. She is worried about what a new smart meter might mean to her lifestyle. Right now, she has to avoid WiFi hot spots and has everything in her house hard wired. The new meter would make her life even more difficult, she said. City Councilman Robert Fieseler, who sits on the Smart Grid Steering Committee, said he takes health concerns about the meters seriously as well. “It is generating a lot of buzz,” he said.

### PG&E’s smart meters originally to be wired

Cameron Scott in “Backlash Against Smart Meters: Are the Green Gizmos Really a Threat to Public Health and Privacy?” on AlterNet on 2nd February reported that Chris Danforth, a smart meter expert with the PUC’s own Division of Ratepayer Advocates, noted that PG&E’s initial proposal to the PUC would have relied on a “power-line carrier.” But the company couldn’t transmit data fast and reliably enough, according to Danforth, “so they had to change to a radio carrier — and then all these issues developed with radio.” Danforth acknowledges that the PUC’s report “may not have gone far enough with non-thermal impacts” and that “the commission should continue to look at this issue in some kind of public forum.” [Italy apparently has all meters networked on power-line carriers – Ed.]

### Wireless smart meters cause heart palpitations and insomnia

Someone who has suffered ill health from a wireless meter in the US added this account on EMF Safety Network in February. “A bank of Smart Meters, that emit radiation 24 hours a day, were installed on the wall of my home, and I have been severely affected with heart palpitations, non-stop ringing in the ears, shortness of breath, insomnia, and sleep interruption, and more. I posted signs not to install smart meters, which is a legal action, but PG&E/Wellington Energy illegally trespassed and ignored the signs. I have a heart condition, and am EMF sensitive, and yet despite many very futile calls to PG&E, they have not removed the meters, nor have they replaced them with the non-wireless analogue meters that have worked perfectly for decades. I have been an excellent ratepayer for decades, I am low-income and cannot afford to move. This is unjust discrimination, and gross negligence not to allow an “opt-out” of any kind. And even worse, with PG&E being fully aware that I have a heart condition, they have added more smart meters on the wall of my home, and they are threatening to add double the meters to my home in the next days, or weeks. How can a utility demand that our health, and the health of our families, and pets be exposed to 24 hour radiation, with no ability to say “No”?”



### Installation of wireless smart meters criminalized

The New York Times on 5th January 2011 reported that in a county in the North San Francisco Bay Area the Marin County Board of Supervisors unanimously passed an ordinance on 4th January which has criminalized the installation of wireless “smart” electric meters as a public nuisance in some areas. They cited “alleged health effects from electromagnetic waves”. The board previously asked the California Public Utilities Commission for a moratorium on the meters, following the lead of the San Francisco Board of Supervisors. The towns of Fairfax and Watsonville, as well as Santa Cruz County, have also passed laws against the meters. A spokesman for Pacific Gas & Electric Co., which dismissed an executive in November 2010 after he admitted to monitoring smart-meter opponents online, said the company planned to continue smart-meter installation despite the ordinance.

Katharina Sandizell, a mother of two arrested for blocking installation lorries, noted that the San Francisco law of 2010 required mobile phone retailers to post SAR levels on each phone. She said that wireless smart meters emit more radiation than phones. “With cell phones, you can choose not to have them, or to turn it off when you’re not using it or you can use a headset. With the smart meter, it’s just constantly on and you can’t turn it off.”

### Wireless opt-out requested in California

On 7th February 2011 two of the five members of the County of Sonoma Board of Supervisors wrote to the President of the California Public Utilities Commission requesting that residents identifying various health and safety concerns related to wireless meters “be allowed to opt-out of the SmartMeter installation program” until the outcome of Huffman’s Assembly Bill 37 is determined.

### Connecticut smart meters: no benefit in cost or energy

A press release on 8th February reported that Attorney General George Jepsen urged Connecticut state regulators to reject CL&P’s plans to replace electric meters because the preliminary study using 2,437 meters showed that they would not be cost effective and they had “no beneficial impact on total energy usage”.

### Wireless smart meters “should be abandoned”

In an article headed “In Depth – Smart meters pose health risk” of 16th February in BCLocalNews, Chris Anderson reported that BC Hydro wants to install a WIMAX system and wireless smart meters on Gulf Islands as a pilot project. He commented that this “will subject all citizens and species to excessive levels of EMR and should be abandoned. Salt Spring wisely rejected two attempts to install cell transmitters in populated areas.” He quoted Dr. Helen Caldicott: “Radio frequencies . . . will have deleterious medical effects to people . . . according to a large body of scientific literature. Babies and children will be particularly sensitive to the mutagenic and carcinogenic effects of the radio frequency radiation” and Dr. Andrew Weil: “Electromagnetic pollution may be the most significant form of pollution human activity has produced in this century.”

### Californian wireless smart meters not certified

Indybay.com on 15th February reported that at a meeting on 10th February in which they joined six other local governments who have passed laws criminalizing the installation of wireless ‘smart’ meters, the Capitola City Council discovered that the wireless ‘smart’ meters that CA utilities are trying to install are not certified by Underwriters Laboratory, a certification that is required under the state electrical code for all electrical appliances and equipment within the home. This convinced Council member Termini that an immediate ordinance was required to protect public safety. Joshua Hart, Director of Stop Smart Meters! said, “Gov. Brown must immediately act to remove President of the CPUC Michael Peevey, a former executive with Southern California Edison, who has been a symbol of the agency’s coziness with utility companies, a coziness that contributed

to the San Bruno disaster as well as the current ‘smart’ meter debacle.”

### Wireless smart meters - health dangers

from Dr Andrew Godsworthy “From the health angle, it should be noted that American residential meters are normally placed outside the house, whereas in the UK they are most commonly under the stairs; i.e. in the centre of the house. This means that more people will be affected in the UK and their wireless transmissions will have to be more powerful to get through the intervening walls.”

### US smart-metre executive resigns after spying

The New York Times on 9th November reported that William Devereaux, the senior director of Pacific Gas & Electric’s SmartMeter Program, was suspended for using a fake name to join an online discussion organized by opponents of smart meters. In an e-mail he signed as “Ralph” he wrote on 4th November to the EMF Safety Coalition saying he lives in Oakland, wanted to learn more about SmartMeters and wished to “join the conversation to see what I can do to help out here.” His email revealed his true name, however, and Sandi Maurer of the EMF Safety Network wrote back: “Hi, aren’t you the head of the Smart Meter program at PG&E? We’d love your help! Can you help us obtain a Smart Meter moratorium ASAP?”

In interviews with The San Francisco Chronicle and The San Jose Mercury News, Devereaux confirmed that he had sent the e-mail message and said it was a “mistake,” but also admitted using an alias on other anti-SmartMeter listings for months. The Pacific Sun on 11th November reported that the front man for PG&E’s so-called SmartMeter Program resigned after admitting he had tried to surreptitiously infiltrate groups which have started legal actions against the programme. Sandi Maurer said “I think it’s especially inappropriate – possibly unlawful – considering we’re in a legal battle with him. He was trying to spy on someone who has a legal case against him.” SmartMeter opponents said Devereaux’s admission appeared in keeping with what they see as the utility’s bully-like insistence on installing the digital meters

# ICEMS TO REPLACE ICNIRP ?

## **ICEMS "a counterweight to ICNIRP"; "ICNIRP has lost its way".**

The publication in late 2010 by the International Commission for Electromagnetic Safety (ICEMS) of a detailed 419-page monograph showing numerous adverse sub-thermal effects from EMFs is a direct challenge to ICNIRP. ICNIRP is technically regarded in some European countries as merely a private club and it has been described in the academic literature as a clique trying to hold onto the old "industrial-military" viewpoint of the US that any sub-thermal exposure is safe. This is in spite of the EU parliament's vote of 2009 that ICNIRP's 6-minute heating limits for an average adult man were "obsolete" and new chronic sub-thermal limits which allow for children and vulnerable people should be adopted. Indeed on 26th November 2010 Microwave News stated that "ICEMS is positioning itself as a counterweight to ICNIRP. This should not be too difficult given that ICNIRP has lost its way."

## **ICEMS "the leading resource".**

ICEMS can now be seen as the leading resource for scientific reviews of the studies into thermal and non-thermal bio-effects. The latest ICEMS scientific review consists of 24 papers and is available on the internet. L Giuliani L, Soffritti M (edd.) (2010) "Non-thermal effects and mechanisms of interaction between electromagnetic fields and living matter" (ICEMS monograph, Eur J Oncol. Library), vol. 5, Ramazzini Institute, sponsored by ICEMS and the National Institute for the Study and Control of Cancer and Environmental Diseases "Bernardino Ramazzini", Bologna, Italy. <http://www.mast-victims.org/resources/docs/ICEMS-Monograph-2010.pdf>

## **ICNIRP "totally wrong".**

ICNIRP's failure to deal with chronic EMF exposure was highlighted by Microwave News on 15th November 2010. Apparently, of the five members of its ELF task force for restated exposure guidelines, "only one of them has training in any of the biological sciences, Saunders earned his doctorate in zoology and comparative physiology. All the others except for Ahlbom work on EMF measurements and dosimetry. Ahlbom is an epidemiologist, who spent a good part of his career showing that EMF exposures are associated with childhood leukaemia; a finding he now seems to want to repudiate. The absence of a molecular biologist on the task group might be the reason the guidelines all but dismiss the possibility that ELF EMFs can lead to DNA breaks (which could explain the link to leukaemia). ICNIRP states that, "Generally, studies of the effects of low-frequency field exposure of cells have shown no induction of genotoxicity at fields below 50 mT" (500 G). This is simply wrong. Totally wrong. ICNIRP has ignored a large body of work published in peer-reviewed journals ... DNA damage at levels as low as 8 microT ... much of



this was known more than a decade ago ... Is anyone going to hold ICNIRP accountable for these errors and biases?"

## **ICNIRP "a subsidiary of industry".**

On 12th November 2010 Microwave News reported that ICNIRP's new guidelines actually increased the public exposure limit to 200 microT (2 G = 200,000 nT). It then asked why this important news first appeared on an EMF website run by an electric utility, rather than ICNIRP's own? "It reinforced the widely-held perception that ICNIRP is a subsidiary of industry."

## **Canadian MPs tell Health Canada to re-examine ICNIRP's limits**

The growing list of people questioning or rejecting the "obsolete" ICNIRP heating limits now includes the Canadian House of Commons Standing Committee on Health. Their 2010 report, "An Examination of the Potential Health Impacts of EF EMR", has five points, including (2) Health Canada request a re-assessment of the literature regarding the health impacts of short and long-term exposure to RF EMR, "which would include an examination of electromagnetic sensitivity" and (5) "Health Canada ensure that it has a process in place to receive and respond to reports of adverse reactions to EMR-emitting devices". The last is to prevent the government from ignoring all adverse effects reported to them, especially children suffering from WiFi in schools.

## **Monaco abandons ICNIRP**

On 26th November 2010, the assembly of the National Council of Monaco reduced ambient microwave radiation limits for mobile phones to 4 V/m (44,000 microW/m<sup>2</sup>) with a maximum of 6 V/m (96,000 microW/m<sup>2</sup>) for TV and radio transmitters. ICNIRP's heating limits are about ten times higher, at 41-61 V/m. Even so, areas around the port at Monaco already measure over 3V/m, compared with biological long-term limits of 0.6 V/m outdoors and 0.2 V/m indoors established by the international BioInitiative group of independent scientists, while other regulators have limits of 0.02 V/m.

## SCIENTIFIC BIAS

### Nobel laureate flees “intellectual terror” in Europe

#### DNA signals.

Professor Luc Montagnier, the 2008 Nobel Laureate who discovered the HIV virus, recently found that bacterial DNA sequences in aqueous solutions still produce electromagnetic signals after all particles larger than 20 nM have been filtered out. The signals were found at dilutions down to 10<sup>-18</sup> where no DNA molecule would remain, but only after the water has been agitated. These signals occur in people suffering from various nervous disorders, including autism, Alzheimer's, Parkinson's and MS, suggesting a pattern of bacterial infection, especially in the gut.

#### “Afraid to publish.”

According to an interview in the major US international journal, *Science*, on 24th December 2010 (vol. 330, page 1732), Montagnier is moving his research to China at Jiaotong University, Shanghai. He has called Benveniste, who discovered the memory of water, a modern Galileo, but one rejected by everybody “because he was too far ahead”. He commented that scientists who have reproduced Benveniste's results are afraid to publish them “because of the intellectual terror from people who don't understand it”.

#### “Minds snapped shut.”

An editorial in the *New Scientist* on 12th January 2011 (no. 2795) commented that Montagnier's claims about the way that DNA behaves “are so astonishing that many minds have already snapped shut”. An online comment noted that quantum mechanics depends on several claims which defy belief, such as the double slit experiment where a single particle seems to be in two places at the same time and is both a particle and a wave, although they are “well accepted in the scientific community”. The accompanying article in *New Scientist*, “Scorn over claim of teleported DNA”, reported Jeff Reimers, a theoretical chemist from the University of Sydney, Australia, as saying, “If the results are correct, these would be the most significant experiments performed in the past 90 years, demanding re-evaluation of the whole conceptual framework of modern chemistry.”



## MEDIA SPIN

### BBC's spin - “BBC breaches its Parliamentary Service Licence”

The BBC's live broadcast of the Parliamentary debate of 20th December on the health dangers of mobile phones featured - almost unbelievably - comments added on screen while the MPs were speaking giving opinions contradicting the points being made by the MPs. Powerwatch's analysis on 21st January was headed “BBC breaches its Parliamentary Service Licence”.

Moreover, some comments were apparently incorrect factually. The picture shows Bill Esterson, MP, with the words “Analysis of more than 10,000 people by IARC found no relationship between years of use and risk”. If this is a reference to the Interphone study with its Appendix 2, it contradicts other reports. The *Sunday Times*, for instance, on 16th May 2010, stated that “people who use their mobile phones for at least 30 minutes a day for 10 years have a greater risk of developing brain cancer” and *Microwave News*, on 17th May 2010, “Those who used a mobile phone for ten or more years were found to be twice as likely to develop a brain tumor.”

### The Times' spin – MTHR interpretation?

Volkow' study (February 2011) is entitled “Effects of cell phone radiofrequency signal exposure on brain glucose metabolism”. On 22nd February the *Daily Telegraph* headed its report in a factual way as “Mobiles do affect brain activity, study finds” and the *New York Times* as “Cellphone Use Tied to Changes in Brain Activity”. Similarly, the *Daily Mail*'s headline on 23rd was “Mobile phones increase brain cell activity”.

In contrast, *The Times of London* on 23rd February headed its brief article with an interpretation by someone outside the study: “Mobiles ‘are no worse for brain than thinking’” and reported that Patrick Haggard, of UCL, “said larger fluctuations can be caused by thinking”. Haggard is apparently a member of MTHR, the government and phone-industry group which has yet to find any health problems from mobile phones; critics say this group is not allowed to find problems with mobiles so long as the Treasury puts tax revenue before health.

## UK NEWS

### **“Do not put a mobile phone to your head. You have only one brain.”**

Brian Stein, a trustee of ES-UK, contributed a forceful article to the Leicester Mercury on 10th February. In response to the rise in early-onset dementia, he warned of the dangers of microwave radiation from mobile phones, as evidenced from hundreds of independent scientific studies. His article concluded: “Wake up! The mobile phone industry will not warn you. The Government will not warn you, until it is too late. Text, use loudspeaker or an air tube. Do not put a mobile phone to your head. You have only one brain.”

### **MP highlights mobile dangers**

Tom Watson, Labour MP for West Bromwich East, led a 45-minute adjournment debate on the effect of mobile phones on human health in the House of Commons on 20th December 2010. He advocated more information on SAR levels for consumers and more research with independent funding, especially as regards children. Although Anne Milton, minister for public health, claimed that MTHR was “independent”, she admitted that “none of the research so far has shown that radio frequency emissions from mobile phones affected people’s health”, in contrast to many independent studies.

In the Guardian that day he wrote: “one fact is indisputable. Brain cancer is on the rise among 20- to 29-year-olds. Imagine if all our worst fears came true? What if mobile phone-related brain cancer in the current generation is like the tobacco and lung cancer scandal for the previous one? The least the government should do is put pressure on the industry to use its vast profits for genuine, independent research. The “big four” – O2, Orange, Vodafone and T-Mobile – generate more than £100bn in revenue, the equivalent of the entire NHS budget.” He added that he asked Professor Lai “if he believed the industry was deliberately playing down the risks because it would affect their profits. His response was yes.” He also said: “Having read the evidence, I wouldn’t let a child or teenager use a phone for anything other than texting and emailing. Children are most at risk because radiation penetrates deeper into their brains through their smaller, thinner skulls.”

### **London lecture by Dr Devra Davis**

On 2nd November 2010 the Department of Social and Environmental Health Research at the London School of Hygiene and Tropical Medicine invited the distinguished scientist Dr Devra Davis to speak on “Toxicology, Epidemiology and Exposure Assessment of Mobile Phones – data gaps and research priorities”. Based

on her new book, “Disconnect: The Truth About Cell Phone Radiation, What the Industry Has Done to Hide It, and How to Protect Your Family”, Dr Davis suggested some priorities for both health research and precautionary policies based on what we know now.

### **“Overwhelming evidence about the damage wreaked by this electrosmog”**

The Daily Mail on 30th November 2010 had a whole-page article headed “Is Wi-Fi frying our brains? Fears that cloud of ‘electrosmog’ could be harming humans” by Alasdair Phillips, the director of Powerwatch. After referring to research on trees suffering harm from WiFi radiation, he commented: “What really unnerves me is the effect these electro-magnetic fields are having on humans, surrounding us as they do with a constant cloud of ‘electrosmog’.” After reviewing the convincing evidence for damage to male fertility, dementia and brain tumours, he concluded a little pessimistically, in view of the £20bn tax revenue from mobiles: “we should not hold out much hope of our politicians protecting us from EMFs.”

### **Dr Sarah Mynhill**

Further to the report in the December Newsletter, the General Medical Council on 6th January 2011 revoked the interim suspension imposed on 14th October.

## INTERNATIONAL NEWS

### **Awakening to EMF threats**

Le Devoir on 18th December 2010 devoted its front page to the dangers of wireless technology with the headline: “Ottawa wakes up to electromagnetic threats”

### **WiFi problems in Canada – “time to stop turning a blind eye”**

Global BC on 20th December 2010, following up the 16:9 TV investigation into WiFi in schools, recorded how 16-year-old McKenzy Honing says school gives him headaches and heart palpitations. “It felt like my heart was skipping beats,” he said. But on the weekends he said “I’d start to get better. And by Sunday I’d start to feel normal.”

**High WiFi levels.** Global News’ current affairs program, 16:9 The Bigger Picture, wanted to find out just how much

radiation laptops and routers in schools could be emitting. Kavinder Dhillon, president of LabTest Certification Inc., tested levels in a simulated typical, active WiFi classroom and found 113.8 microW, well below Health Canada’s level of 10 million microW. In the hallway, however, it was 2,600 microW. Dhillon said “The people who are in the industry, feel this is a high level.”

### **WiFi risks now accepted.**

When 16:9 first asked Health Canada about WiFi, Beth Pieterston, a Health Canada representative said there was no reason to worry: WiFi was not responsible for the headaches, nausea and hyperactivity some kids say they experience. Now, however, Health Canada is promising to look at the potential health risks associated with WiFi exposure.

**Unwilling to gamble with children's health.** Dr. David Carpenter said "The weight of the evidence demonstrates clearly that exposure to RF radiation causes disease. The evidence is strongest for cancer." It's time for Canada to stop turning a blind eye to WiFi's possible risks. "You don't want to wait until you can count the bodies before you tell the public that there is a serious potential of harm." Herouville-St.Clair, France is the first municipality in the world to remove WiFi from schools and public buildings. Mayor Rudolphe Thomas told 16:9 he's not willing to gamble with childrens' health.

### Parents withdraw children from WiFi schools

The Maple Ridge News on 10th December 2010 reported that parents at a Laity View elementary school in Maple Ridge have removed their children from school over fears of WiFi radiation. Samantha Boutet, a naturopathic doctor, says her daughter began experiencing headaches, dizziness, and anxiety last at the school. "No one could tell us why she was getting sick," she said, but the symptoms were the same as reported in the media for other children suffering from WiFi, and a wireless router was mounted on the wall in her daughter's classroom. "Her headaches were a 10 out of 10 while she was at school, and they are down to a five out of 10 now."

The Canadian House of Commons' Standing Committee on Health released a report in early December 2010 recommending the Canadian government should fund long-term studies on the potential health impacts of WiFi exposure. Numerous grass-roots groups around the country have contacted MPs, MLAs, and school boards, asking for a moratorium on Wi-Fi meanwhile, and for electromagnetic hypersensitivity to be recognized as a medical ailment.

### Health Canada "absolutely irresponsible"

In the Nanaimo Bulletin of 12th December 2010 an article described how mobile phones make Christel Martin's head spin. Her vision blurs and her body starts to shut down. This also happens with WiFi, phone masts and cordless phones. "I couldn't even go in my home office – it was just like going into this cloud," said Martin. "We're polluting ourselves to death and the medical establishment hasn't got a clue." For years, Martin struggled with her condition, visiting several doctors but receiving no diagnosis until last year.

### Do the research first or pay a hefty price.

Dr John Cline of Nanaimo, who is also certified by the International Board of Clinical Metal Toxicology, says many patients he treats have electrosensitivity caused by electrical devices or 'dirty' electricity in their homes. After removing devices such as cordless phones, many of his patients see dramatic health improvements. He said people who have more metals or chemicals in their bodies are more susceptible. "We go through our daily lives and don't give a thought about this electromagnetic

smog we are in," said Cline. "As a society, we'll pay a hefty price for using the technology without doing the research first."

**Non-thermal, not thermal, debate.** Health Canada set safety guidelines in 1979 based on temperature increases. But Katharina Gustavs, an EMF consultant in Sooke, says these guidelines only protect people from burns and heat, not damage at the cellular level, which could increase cancer risks: "The big health debate is about the non-thermal effects, because they are not as acute or obvious."

**"Homes turned into torture chambers."** Magda Havas, an associate professor of environmental studies at Trent University, Ontario, said, regarding Health Canada, "They are being absolutely irresponsible and the question is why are they not protecting the health of Canadians." Chris Anderson, an electromagnetic radiation assessment consultant from Salt Spring Island, said, "There is no reason our homes should be turned into living, writhing torture chambers for people with electrosensitivity."

### Phone masts cause illness: stricter limits essential

According to the Times of India on 7th December 2010 a new report for the Department of Telecommunication by a faculty of the Indian Institute of Technology, Powai, reinforces what scientists have long held, that areas around phone masts are high-radiation and consequently high-risk zones and India must raise the safety bar. Girish Kumar, a professor in the electrical engineering department of the Powai Institute, said: "These towers transmit radiation 24x7, so people living nearby will receive 10,000 to 10,000,000 times stronger signal than required for mobile communication." The mobile phone industry was becoming "another cigarette industry." "Unfortunately, all of us are absorbing this slow poison unknowingly."

Kumar visited the apartment of a lady detected with cancer a year after a phone mast was installed nearby. Radiation near the windows was 0.007069 W/m<sup>2</sup>. India has adopted a radiation norm of 4.7 W/m<sup>2</sup>, but the study noted serious health effects at as low a level of 0.0001 W/m<sup>2</sup>. Though India adheres to the radiation density limit set by the International Commission on Non-Ionizing Radiation Protection (ICNIRP), Kumar observed Indians faced an added threat: radiation from multiple towers. "One should know the actual radiation pattern (unfortunately not made public) to calculate exact radiation density at a point," he noted. One of the first steps he recommended was tightening radiation norms and reducing number of towers. Many countries in the world have adopted much stricter maximum radiation density values of 0.001 to 0.24 W/m<sup>2</sup>.

## Government report warns of greater mobile danger in India

A 58-page report released in February by the Indian Department of Telecommunications based on a government panel of eight experts warns that radio emissions from mobile phones may pose a hazard to public health. R. S. Sharma, a public health specialist from the Indian Council of Medical Research, states that, "the hot tropical climate of the country, the low body mass index; low fat content of an average Indian as compared to European countries and high environmental concentration of radio frequency radiation may place Indians under risk of radio frequency radiation adverse effect."

## Mobiles in pregnancy linked to children's behavioural problems

The Australian, Herald Sun, Daily Mail and Daily Telegraph on 7th December 2010 reported that pregnant mothers who regularly used mobile phones were more likely to have children with behavioural problems. The risk was higher when the children themselves used mobiles at a very early age. This new study of Danish data re-enforces the important earlier one (Divan HA et al, 2010, 2008).

## Proposals to limit children's radiation exposure

The Jerusalem Post on 23rd November reported that a joint session of the Knesset Interior and Labor, Social Affairs and Health committees declared on 22nd November that a program should be launched

to minimize mobile phone radiation exposure as a cautionary measure. Henin, who chaired the session, said that "the fact that EMR cannot be seen does not mean that it is not dangerous. We must ensure that children [and staffers] who spend many hours a day in educational institutions are safe."

## 60% of EU RF exposure measurements below international biological safety limits

The European Health Risk Assessment Network on Electromagnetic Fields Exposure project, funded by the European Commission, produced a report (D4) in August 2010 on European RF exposures. The report concluded: "The results of exposure measurements show that more than 60% of recorded total EMF exposures were below 1 V/m, less than 1% above 6 V/m and only less than 0.1% were above 20 V/m field strength." This implies that 40% of measurements were above the international biological safety limits of the BioInitiative Report of 0.6 V/m outdoors and 0.2 V/m indoors. Many ES sufferers react at 0.05 V/m.

## 2-7% bedrooms above biological limits

A study of EMF exposure in Austrian bedrooms (Tomitsch J, et al, 2010) shows that 2% of average 10pm-6am ELF exposures were over international biological limits of 100 nT, and 7% over RF limits of 1,000 microW/m<sup>2</sup>. Bedside lamps, plug transformers, and DECT and mobile phone base stations gave the highest readings.

# ANIMALS AND TREES

## Discovery of turtles' longitudinal geomagnetic sense – "the final piece of the puzzle"

Wired Science on 24th February reported that Dr Kenneth Lohmann at the University of North Carolina (Current Biology, 2011) has used artificial magnetic fields to show that migratory loggerhead sea turtles have geomagnetic sensors which read both latitude and longitude from the Earth's fields. The latter is more demanding and has perplexed scientists for years, but Lohmann says: "Turtles can determine longitudinal position by using pairings of intensity and inclination angle as an X, Y coordinate system." Previously scientists hypothesised that air- or water-borne chemicals could be the clue. Dr James Gould of Princeton University, however, who wrote in 2008 that "A skeptic could reasonably believe that the latitude cue is magnetic, but that determining east-west position depends on magic", called this new discovery "the final piece of the puzzle."

## Worries on fish GPS

The Australian on 28th December 2010 reported that scientists are concerned that sea generators and their cables to shore could interfere with the internal compasses of sea creatures. "Before we put these power-generating devices into the water, we need to know how they will affect the marine environment," said Andrea Copping, an oceanographer with Pacific Northwest National Laboratory's Marine Sciences Lab in Washington. Sharks have black pores near their snouts which are filled with a conductive jelly-like substance and serve as external magnetic receptors, said Stephen Kajiura of Florida Atlantic University. Rays have a similar detection system. Turtles have magnetic receptors connected to their central nervous system. Lobsters, crabs, tuna and other species are thought to have similar guidance systems. Salmon might have chemicals in their brains to detect magnetic fields.

## Third magnetic locator discovered in pigeons

Current Biology on 24th February published the discovery by Le-Qing Wu and David Dickman, neurobiologists at Washington University, that pigeons sense magnetism with their ears. Previously it has been shown that they use magnetically sensitive particles in their eyes and beaks for geomagnetic location. These magnetically sensitive compounds are located in birds' vestibular lagena, an inner ear structure, according to Wired Science on 24th February. Receptors in the lagena, known to respond to gravity in head tilt, probably interact with these magnetically sensitive particles, allowing the brain to encode a geomagnetic vector linking motion, direction and gravity. Fish and reptiles have similar ear structures.

## Pigeons disorientated by phone masts

Express Buzz on 27th December 2010 reported that pigeon lovers believe that the mushrooming cellphone towers in Chennai are keeping the birds from reaching home quickly. Sankaralingam,

president of the Chennai Homing Pigeons Association, said "Pigeons usually take only 45 seconds to fly a kilometre. Cellphone towers hamper their flight, forcing them to take a more elaborate route... Recently, many pigeon fanciers noted that their birds took a longer time to cover short distances. Discussion showed that this phenomenon occurred in places where there were cellphone towers. Only about 70% of pigeons are now able to traverse the same distance within the given time-frame." A study suggests that pigeons, which fly using the earth's magnetic field, are getting confused by signals from cellphone towers. The mayor, M Subramanian, observed that pigeons and sparrows were becoming difficult to spot in the city.



### **Sparrows' decline linked with EMR from masts**

According to N. Kalyani, in ExpressBuzz on 5th June 2010, Dr Pattazhy, a reader in Zoology in southern Kerala's Punalur, reported that "Birds which nest near [mobile phone] towers were found to leave the nest within one week. Incubation lasts for 10 to 14 days. But the eggs laid in nests near towers failed to hatch even after 30 days." The masts "can cause thin skulls of chicks and thin egg shells. And microwaves can interfere with their sensors and misguide them while navigating and preying." To prevent overlapping high radiation fields, Dr Pattazhy says new towers should not be permitted within a radius of one kilometre of existing towers.

### **Foxes are magnetically sensitive?**

The Daily Mail on 12th January reported that Professor Burda has discovered a high proportion of predatory jumps by foxes face north-east, despite the weather or daytime, suggesting a possible magnetic sense like many fish, birds and other mammals.

### **Radio-tagged tigers decline in number**

The Observer on 20th June 2010 reported a mystery disease effecting radio-tagged Siberian tigers. Their number has fallen 40% in 5 years, driving them to the edge of extinction. The last tagged animal, a 10-year-old tigress called Galya, is the fourth animal with a radio collar to die in the past 10 months, shot in Russia as a danger to people. All had been in contact with a male tiger suspected of carrying an unidentified disease that impaired the ability to hunt. "We may be witnessing an epidemic in the Amur tiger population," said Dr Dale Miquelle, the Wildlife Conservation Society's (WCS) Russia director. Galya entered the town of Terney looking for an easy meal. "This tiger had lost its fear of humans – typically Amur tigers will never expose themselves for observation. It was like seeing someone you know turn into a vampire," Miquelle said. "Initial necropsy results show an empty digestive tract, which is highly unusual. We're still waiting for results of further tests, but the abnormal behaviour suggests disease, possibly neurological," said Miquelle. She weighed only 91kg at death, down from 140kg. WCS now has no radio-collared tigers for the first time in 18 years, although WCS Russia has tracked more than 60 tigers since 1992.



### **WiFi harms trees - Wageningen University research**

According to the Los Angeles Times on 23rd November researchers from Wageningen University Holland showed that trees planted close to WiFi suffered from damaged bark and dying leaves. The city of Alphen aan den Rijn ordered the study five years ago after officials found unexplained abnormalities on trees which they did not believe had been caused by any known viral infection. The researchers exposed 20 ash trees for 3 months

to 6 types of radiation, at 2412-2472 MHz and 100 mW at 20 inches. Trees closest to the WiFi developed a 'lead-like shine' on their leaves caused by the dying of the upper and lower epidermis, eventually resulting in the death of parts of the leaves. The study found 70% of trees in urban areas show the same symptoms, compared with only 10% 5 years ago. Trees in densely forested areas are not affected. WiFi could also slow the growth of corn cobs.

### **Tree diseases in New Zealand – links to electro-pollution?**

The Manawatu Standard on 4th December 2010 reported that an unknown disease was affecting New Zealand's oriental plane trees in Palmerston North and London planes in The Octagon, Otago, which had suddenly "fallen ill". Anthracnose, a fungal disease that defoliates the trees over years, is unlikely to be the cause because the trees on Fitzherbert Ave were bred to be resistant to that disease. Frank Buddingh, an arborist contracted to Dunedin City Council, suggests "We're dealing with a secondary fungal infection." Other reports say dying trees are in areas of high electro-pollution. Readings in the Octagon, with its surrounding buildings, have reached 4.0 V/m, above international biological limits of 0.6 V/m. The largest number of dying trees is on the southern side where the readings are highest.

### **Geraniums and trees harmed by EMFs, reduced anthocyanin**

According to Boulder dailycamera.com on 4th July 2010, Katie Haggerty noticed in 2005 that her geraniums were stunted. So she put the plants in a Faraday cage and found that the plants had larger leaves and were growing more vigorously. She has now had published a peer-reviewed paper on EM harm to aspen trees, showing that shielded aspens were healthier than those that were not, with more growth, bigger leaves, 60% more total leaf area and 74% more shoot length than a mock-shielded group. EMFs adversely affects the growth rate and autumn anthocyanin production in aspen, leading to the worrying decline in aspen trees. This mirrors known magnetoreception in plants (Galland P, Pazur A, 2005)

## ES WIRELESS SMART METER STORIES

*From NewsBlaze.com, Stop Smart Meters, comments on Tom Zeller's article, "Questioning the 'Smart' in Smart Meters" in Green.blogs.nytimes.com.*

**SA, San Clemente CA:** "The very first symptom was when my husband and I noticed that both of our ears were ringing. The meter was located directly outside of our bedroom wall behind our headboard. We suffered waking up feeling heavy, crushing pressure on our chests, rapid heart palpitations, waking up at night at precisely the same time for weeks (such as 1.23 a.m.) emotional instability, constant agitation, red bumps, rashes and thermal burns on the face, strained speech, difficulty speaking or loss of words, poor memory, painful inflammation of ear canals due to cell phones, (especially blackberries and iPhones, within 150 feet from me), DECT phones, WiFi, electrified outlets, refrigerators, and other electromagnetic fields. The sensation that the left hemisphere of my brain was actually being cut or split in two, back of skull feels electrified, back of tongue feels electrified, electric shocks through my eyes, legs and feet. Brain feels like mush, cannot communicate or articulate well, dry cough around cell phones and WiFi."

**A.E. , San Diego CA:** "It started with the aches and pains, the super-dry lips and a loud squealing in my right ear. Even my teeth hurt. Then the buzzing sound intermittently mixes with the high pitch squealing noise in my ear, followed by extreme exhaustion or fatigue in random parts of the day or evening, to the point where I couldn't even stand. The headaches make me feel like I want to die. I can't sleep until 5 or 6 am and pop back up at 7 am. I am nauseous, and my ear in is extreme pain. I have feelings as if the ground or furniture is moving or being bumped. I get dizzy and have problems orientating myself when I go from standing to sitting or vice versa."

**R.H., San Diego CA:** "I began having symptoms of head burning and pressure on my chest within a few days. As time progressed the symptoms worsened. I had severe burning in my head and headaches of a new type. I started having palpitations, arrhythmias and flutter. I

called SDG&E. Three people, including an engineer and the director of the Smart Meter program, came to my home, spent an hour talking and photographing the meters. They took no measurements of the radiation, though they said they would on the phone. The next day SDG&E informed me that they would not be replacing the meters with the analogue meters. They assured me that they are concerned about people's health.

By six weeks in, my cardiac symptoms were so severe and erratic that I had to move out. I rented an apartment, which turned out to be unsafe as well. The Smart Meters are everywhere. With the intensification of my symptoms, I have become EMF/RF sensitive and now have the above problems around cell towers, WiFi and other sources, accompanied by skin rashes and burning. I am being evaluated by a cardiologist. I have always had a strong, healthy heart, even told so by doctors. The cardiologist has sent me for an evaluation by a neurologist as well.

Five people have reported symptoms in my home: My father has experienced headaches and visual migraines. My mother reported having pressure on the upper part of her chest and palpitations. One neighbor exposed to these 16 cluster meters is experiencing headaches and chest tightness. Another neighbor has difficulty opening her eyes in the mornings after 8 hours by the meters. Her ophthalmologist could find no explanation. She said she uses her fingers to open her lids. All of the above symptoms have occurred since the smart meter installations. The symptoms are worsening for everyone.

I am running scared living this nightmare. I don't know where to live and fear for my well-being. I already have a prior immune-disability and I thought I would be legally protected by the ADA. I don't know where it is safe for me to live. In addition, the financial impact of this disaster compounds. I pay my monthly mortgage and rented a place, which due to symptoms, I cannot stay in. I am not sure that I can rent or sell my condo in good conscience. I am seeking medical care including treatments not covered by any insurance. My out of pocket costs continue to grow."

**Steven Golden, San Diego CA:** "On 29th September 2010 at least 4 Smart

Meters were installed on my apartment building on the wall just below my Unit. That very day I woke up with a swollen wrist for absolutely no physical reason. I opened my front door and found the notice that the Smart Meters were installed. My wrist and hand swelled so badly that I had to get a cortisone shot. Then, I got sick with sinus problems and a respiratory attack. One occurred after the other, and both conditions are still with me 3 weeks later. I have never been sick for more than one week in my entire life. I have heart palpitations and an erratic heart beat, along with insomnia. The latest affliction since the Meters were installed is Phantosmia, which I have never had before and will not go away.

I am EMF sensitive and these Smart Meters are ruining my health, my living conditions, and my life. We are being bombarded with Microwave EMF from these Meters from all directions without our knowledge or consent. Since I am EMF sensitive I have chosen to never use WiFi or any other wireless technology in my apartment. With these Smart Meters I have no say in the matter and I am being slowly tortured by SDGE and the CPUC. This is an outrageous intrusion into our lives and a danger to the health of everyone in San Diego and wherever these Meters operate. Those of us who are EMF sensitive have an early warning system built in and we know what these meters are doing to our health. Those who aren't as sensitive or may not realize that they are will not realize that the Meters their utility forced upon them are making them ill and even slowly killing them."

**Anon.** "I was made very sick by the pulsing microwave radiation emitted from the "smart" meter that was placed on my home by Con Edison. Using a microwave radiation reading device, I measured extremely high levels of radiation coming from the meter inside and also outside throughout my neighborhood. I had Con Ed remove the meter and my symptoms got better. The "smart meter is a stupid and dangerous mistake and should be reversed immediately!"

"I believe they are giving off a low pitched sound which is unbelievably annoying. I have mine on my house and my neighbors not 10 feet away. I have to sleep with the TV on to drown out the sound."

## 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.

### 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

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### 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)**

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### 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.

### Newsletter

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

### Donations

Donations should be sent to the BM Box, London.



for all people sensitised by electro-magnetic fields and radiation

## ElectroSensitivity UK

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**BM Box ES-UK,  
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Alternatively, if you have access to email,  
the charity can be contacted on the  
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**[enquirers@es-uk.info](mailto:enquirers@es-uk.info)**

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