

Functional Medicines' Views and Approaches on the Evaluation and Treatment of Electro-Magnetic Frequency Exposure

**By Dr. Michael John Badanek, BS, DC, CNS, CTTP,
DACBN, DCBCN, MSGR./CHEV**

The Adverse Health Affects Of EMFs

A Swedish study based on more than 400 sufferers of electrical sensitivity found they had a multitude of symptoms. These symptoms were:

- skin problems, 44 people
- sensitivity to light and eye problems, 29 people
- tiredness and weakness, 29 people
- heart problems and high blood pressure, 28 people
- headaches and migraines, 24 people
- pain in joints and muscles, 24 people
- dizziness, 23 people

- concentration difficulties, 19 people
- nausea and general poor health, 18 people
- memory disorders, 13 people
- endocrine reactions, 12 people
- respiratory and lung disorders, 10 people
- stomach and intestinal disorders, 10 people
- numbness, 9 people
- influenza and throat problems, 9 people
- sleep disorders, 8 people
- hearing problems and tinnitus, 8 people
- and so the list goes on; tremors, cramps, anxiety, depression, haziness, confusion, fainting, coma,
- asthma, allergies, speech difficulties, irritability.

These symptoms might not seem significant but they have the power to change people's lives. You reach a point where you're unable to function. This is what happened to me. But I was lucky. I went through it all and came out the other side. For some people EMF exposures are more tragic....

EMFs The Real Cause Of The Diseases Of The 21st Century?

This question is not as far-fetched as it might sound. Here are some statistics:

- A hundred years ago **cancer** was responsible for only 3% of all deaths in the US. Today it's responsible for more than **20% of deaths**,
- In 1930, 3000 people were dying in the US of heart disease. In 2005 **heart attacks and strokes** killed nearly **800,000 people**, an increase far outstripping population growth,
- 100 years ago less than 0.01% of the US population was affected by **diabetes**. Today nearly **27% of the population** is affected by the condition.

Dr Samuel Milham, one of America's most noted epidemiologists of the last 50 years, argues that the **rapid and recent growth in radio frequency radiation** from cell phones and cell phone towers, Wi-Fi and Wi-max systems, powerlines, broadband internet over power lines, and other personal electronic devices **may prove to be our downfall**.

An epidemic of disease and mortality

He talks of an epidemic of disease and mortality that we may soon face because of these technologies. He lays out clearly the link between EMF exposure and most of the twentieth century diseases of civilization, including cancer, cardiovascular disease, diabetes, and suicide.

Dr. Milham says the 'War on Cancer' has been a failure because "people have missed the major carcinogen".

Are You Exposed To EMFs?

Virtually everyone is exposed to EMFs. Even in the most far-flung corners of the planet you can usually get a signal on your cell phone. The risks are higher if you live in a town, if you use a cell phone, or WiFi significantly, or are exposed to these wireless technologies or you live in an area where there is a high level of electromagnetic pollution from cell phone towers, radar, digital TV or you live in proximity to power lines or an electrical substation.

A growing concern is smart meters. I'm referring to wireless meters that utility companies are increasingly installing on homes to measure your electric, gas or water usage. For many people this is their first encounter with RF radiation

The way smart meters are being forced on innocent homeowners is wrong. But when people discover a smart meter has been installed on their home they often overlook the fact that many devices in their home are generating EMFs just as bad as their smart meter, sometimes worse. I'm talking about, Wi-Fi, cell phones, cordless phones, walkie-talkies, clock radios and similar devices.

Why Are We Told That These Technologies Are Safe?

That's an easy one.

It's the same reason the pharmaceutical companies are busy manufacturing drugs which treat the symptoms of disease without addressing the issue of what's really causing the disease.

It's about money

Hundreds of billions of dollars of it in this case. As the saying goes, money is the root of all evil. It sounds as though I'm being skeptical but my reason for saying this has nothing to do with doubt, disbelief, or negativity. It's based on my personal experience with EMFs, backed up by solid research on the issue.

The Telecoms industry is now one of the most powerful industries on the planet. It stands to lose an awful lot if ever the truth came out. For them, the truth must never come out.

But there is a second important reason. We want to believe these technologies are safe. We want to believe that cell phones can be pressed against our heads for as long as we like, that laptops can be use on laps and that it has no effect on our fertility. We want to believe that sleeping next to a cordless phone emitting pulsed microwave radiation while we sleep has no effect on our health.

But the facts tell a different story

There are plenty of facts out there. In 1891 a French doctor called d'Arsonval and Nikola Tesla demonstrated the effects of EMFs on biological systems documenting changes in bodily characteristics including, respiration, perspiration and body weight. Over the last few decades

literally thousands of published peer reviewed studies point to the adverse biological effects of these EMF exposures.

What's ironic is that in the early 1980s when cell phones were first introduced into the US market they were exempted from pre-market safety testing. Somehow the industry managed to convince the government regulatory authorities that the mechanisms of harm at work were non-detrimental.

Now we have a situation where these devices, which have undergone no pre-market safety testing and which study after study points to their detrimental effects, are gradually taking over the world....

Money Buys Power

It's difficult to put an exact figure on it, but the Telecoms market is worth many hundreds of billions of dollars. That's a phenomenal amount of money. And that phenomenal amount of money confers a phenomenal amount of power.

Cell phone companies are like any other company

Their principal objective is to make a profit for their stakeholders. Are they interested in producing safe phones? No. If that was the case they would already have took the necessary steps to make cell phones using safer technology. Their overriding objective is to make money. Making money means giving consumers what they want.

What do consumers want? Do they want safer cell phones? Unfortunately safety is way down the list of priorities. Consumers want to be able to do more things with their cell phone, whenever and wherever they like. Consumers aren't asking for safe cell phones because most of them aren't aware that cell phones are dangerous. They aren't aware of the dangers because the Telecoms industry is so busy telling us that cell phones are safe.

The mainstream media is perpetuating this idea because in many cases the media companies and cell phone companies are owned by the same people. And where they aren't owned by the same people, the Telecoms companies can dictate storylines through their advertising budgets. Added to which these dangers are invisible. No one can see them or feel them, except people who become electrically sensitive...

The Media Battle

I didn't need any convincing that cell phones and other similar supposedly harmless EMF technologies were detrimental to my health. My body told me so.

Fortunately for the Telecoms industry I'm in the minority. And even more fortunately for them:

Most people take notice of what somebody in a white lab coat has to say - even if they've been paid to say what they are saying.

There are thousands of studies documenting the detrimental effects of EMF exposures on the human body. Studies showing adverse effects from wireless technologies including cell and cordless phones, cell towers, 'smart meters', WI-FI, wireless laptops, wireless routers, baby monitors, and similar electronic devices and from power lines, electrical wiring and other appliances.

But still, these technologies continue to be portrayed as perfectly safe. The Telecom industry will go to any length, to protect its market. It's been manipulating the evidence, publishing studies which create doubt, suppressing studies which reveal the truth. They've been downplaying the health effects right from the beginning when cell phones were introduced.

David and Deborah Reynards Tragedy

Nobody really had an inkling that cell phones might be dangerous until David Reynard went on Larry King live on 23 January 1993.

In August 1988 David Reynard bought his wife Susan a cell phone. Seven months later, a medical scan revealed a tumor in Susan's brain.

She claimed that the tumor was a result of being bombarded by radiation from her cell phone

In April 1992, Susan filed a lawsuit against the cell phone manufacturer, the network provider, and the retail store that sold the phone. A month later, Susan died of brain cancer.

Motorola shares took an instant dive on the stock market. The cell phone industry got worried. That same year it commissioned a \$28 million study, the Wireless Technology Research program, to confirm the safety of cell phones.

The First Industry Funded Study On The Safety Of Cell Phones



The first major study on cell phone safety, the **Wireless Technology Research program**, was industry funded and headed by **Dr. George Carlo**. His job was to prove once and for all that cell phones were safe.

Unfortunately his findings did not quite align with his paymaster's requirements.

After 7 years of research he concluded that cell phones were detrimental to human health

Dr. Carlo was immediately removed from the program and the public spin machine was put into action to smooth out any damage that his announcements might have made. And so it has been ever since.

When the US Senate Hearings covered this subject back in September 2009, the dirty tricks of the cell phone industry were brought into the limelight by Dr Devra Davis of the Environmental Health Trust.

What was missing for a long time was proof that cell phone type radiation could damage DNA. Profs Lai and Sing in their 1994 study proved just that.

The lobbyists responded by trying to get their funding revoked. They went to the journal that published the article and tried to get the article unaccepted in a publication where it had already been accepted. They hired other scientists to do research to try and invalidate the findings. These scientists actually confirmed the work but it was never published.

The evidence is overwhelming

When you look at the research (the independent research) the evidence is overwhelming. The biological effects of EMFs are widespread;

- genetic effects,
- cellular and molecular effects,
- behavioral changes,
- effects on the nervous system,
- impaired learning,
- impaired fertility,
- metabolic effects,
- depressed immune system,
- hormonal disturbance,
- sleeping disorders,
- cardiovascular problems etc.

One of the most spectacular findings to come out of the studies is that EMF exposures of the type emitted by cell phones cause blood brain barrier damage. The ramifications of this are so far reaching they're difficult to contemplate. There are now more than 20 studies which prove this.

Such is the power of the Telecom lobbies, few people are aware of these devastating health effects.

EMF Protection – What You Need To Do

The Magic Bullet



There is no magic bullet. There is no magic pill, no chip, diode or neutralizer you can buy which will suddenly make EMFs safe and resolve your health issues. None.

I'm referring to the growing market in EMF chips, diodes, stickers, harmonizers and neutralizers that has developed in recent years. Things you stick on your phone, put next to your WiFi router or plug into your wall socket, which are supposed to make EMFs safe.

I haven't tested them all but I have tested a lot of these devices because I too once thought this was the best way to deal with my symptoms around EMFs. **It's not.**

Not only that, trying to deal with EMFs in this way can be **dangerous**. These devices lull you into a false sense of security. You buy these devices thinking you are safe; so you increase your EMF exposure. Until one day you start to feel very unwell. Countless other people have reported a similar story.

On the other hand there are people that report to me that they've felt better using some of these devices. The question is, why do they feel better? Is it because of a real beneficial effect from the device or because of some perceived effect?

The body has an immense capacity to self heal, commonly called the placebo effect. I strongly believe in the body's capacity to self heal but this is intrinsic. It is not reliant on an EMF gizmo.

EMF gizmos should not be your first line of protection

It's important that you deal with EMF protection properly. To gain long-term protection there are no shortcuts.

When my body first started to react to EMFs back in 2002 I didn't know this. I knew very little. And even when I realized EMFs were behind what I was feeling I didn't really understand what an EMF was, or how it affected my health.

How Do I Know What Works?

I now know what works because I use it everyday – and it works! The advice I'm giving you is not based on theories. It's based on hands on experience.

It took me a long time to know what works because I too was taken in by all the EMF gizmos. By all the polished sales talk promising instant health and vitality.

What spurred me on was when I'd tried all the gizmos and my condition still hadn't improved. In fact it had got worse.

It took me nearly 10 years to understand the science, understand what was happening to my body and learn how to deal with EMFs.

I'm guessing you haven't got 10 years to waste on this and risk putting yourself in even more danger. That's why I started talking about this and sharing my knowledge.

There are concrete and practical steps you can take to safeguard your health and protect yourself from EMF's. Not only can a few simple steps help you set up proper EMF protection - you can dramatically improve your health right off the bat.

How To Protect Yourself From EMFs

The cornerstone to effectively dealing with EMFs is:

- avoidance, and
- protection

But to practice avoidance and protection you need to be able to measure your exposures. And to measure EMFs you need to have a basic understanding of them.

It's that simple. **Even if you're a picture of health if you apply these principles to your current circumstances you can significantly improve your health, have more energy, sleep better, maybe lose weight, feel better.** So what exactly are the health benefits of reducing your EMF exposure?

Health Benefits Of Reducing EMF Exposure

Studies link EMF exposure to a growing list of biological effects and diseases. If you reduce your EMF exposure you can reasonably expect to protect yourself from the following conditions and diseases:

- Cancer
- Cardiovascular disease
- Diabetes
- Depression
- Premature aging
- Epilepsy
- Autism
- Leukemia
- Brain Tumors
- Sterility
- Infertility
- Insomnia
- Behavioral problems in children
- Tinnitus
- Nervous system diseases, and much more.

Understanding EMFs

EMFs is a complicated subject. But we're not interested in EMFs particularly, we can leave that to the scientists. What we're interested in is 'EMFs and health'. That's a subject which few people understand. There are three crucial aspects to EMFs it's important to get clear on:

1. They're **invisible**.
2. They **permeate practically anything**. They can go through brickwork and wood. Most metals provide little protection. This is especially true of magnetic fields.
3. Its not because you can't feel EMFs that you're not affected by them

This is so fundamental I'm going to say it again:

Its not because you can't feel EMFs that you're not affected by them

This is not just my opinion. It's what the studies tell us. Let me explain. If you're electrically sensitive then you have your own early warning system. For instance with me my head would get hot and

prickle whenever I found myself in a high EMF environment. I would deal with this in one of two ways; either I'd get out of that place or I'd protect myself. That's the short-term solution. The longer term one is more complicated.

If you're like most people you're not electrically sensitive. You won't feel when you're being subjected to "high" levels of EMFS. But the studies tell us that everyone is affected by EMF exposures.

That's why you need to analyze your environment.

EMF Questionnaire

To determine your level of exposure and evaluate your risks here's a short questionnaire (count your yeses as you are doing this and give yourself one point for each yes):

Your Exposure To Cell Phone Radiation

1. Do you press your cell phone against your head while talking?
2. Do you talk for 2 hours or more per day on your cell phone?
3. Do you carry your cell phone on your person when it's switched on (i.e. in standby mode) for most of the day?
4. Do you talk on a cell phone in your car?
5. Do you keep your cell phone close to your bed at night?
6. Do you use Bluetooth wireless?
7. Do you use your cell phone when the signal strength indicator is low?
8. Do you use your cell phone for streaming more than 2 hours per day?

Your Exposure To Computer Radiation

1. Do you use a computer for more than 4 hours per day?
2. Does your computer have the WiFi function enabled? (this is harmful even if you connect to the internet on a cable)
3. In your place of work are you within 6 foot of other computers?
4. Do you use a laptop rather than a desktop model?
5. Do you use a laptop primarily on the mains power supply?
6. Do you use a laptop, tablet or smart phone type device on your lap?
7. Do you use a wireless modem router?
8. Do you sit within 6 foot of your wireless router?

Your Exposure In The Home

1. Do you remain near your microwave oven when it's on?
2. Have you had your microwave oven tested recently for leaks? (even new microwave ovens leak!)
3. Is your home protected by a wireless burglar alarm?
4. Do you have a DECT cordless phone in your house?
5. Do you have a cordless phone next to your bed?
6. Do you have WiFi installed in your home?
7. Do you or your children use wireless video gaming software like the Xbox360 or the Playstation?
8. Do you have a wireless music system installed in your home?

Exposure In Your Environment

1. Is your home within 400m and direct line of a cell phone tower?
2. Is your home within 50m of a power line?
3. Are you surrounded by other homes with WiFi installed?
4. Is your home equipped with a smart meter to measure your electricity consumption?

How Did You Score?

First, let me share with you how I scored.

There are 28 questions in this questionnaire, you have kept your score of yeses right? If there are questions where you are not sure how to answer, count these as zeros.

My score is 2. As in two yeses.

I am even going to tell which ones they are: more than 4 hours on a PC a day and my neighbors have got WiFi – whose haven't?

How did you score? Did you score 6 points or more?

6 points might not sound a lot but EMF exposures are cumulative. The different sources of EMFs that your body is being subjected to all add up, cell phone, WiFi, cordless phone, cell phone tower. It's the cumulative exposures that count – the total EMF load.

If you scored 6 points (6 yeses) or more your EMF exposure is potentially very high. Take action NOW to reduce your exposure.

What follows are my avoidance and protection tips – so you can get started taking action.

Cell Phone Protection



If you use a cell phone this is probably your most significant form of EMF pollution. I'm not condoning cell phone use, but here's how you can minimize your exposure to cell phone radiation:

1. When you make a call **don't put your cell phone next to your ear until your correspondent has picked up the call.** When your phone rings, press on the accept call button but wait a few seconds before putting the phone against your ear. Radiation levels are highest at the beginning of a call.
2. **Don't use your cell phone whilst travelling.** Cars, buses and trains have a Faraday Cage effect, rather like a microwave oven (the radiation is concentrated on everything (you and the other occupants). Also, in a moving vehicle your cell phone is constantly scanning to maintain contact, radiation levels are much higher than if you were stationary.
3. **Don't sleep with your cell phone switched on at night.** Your body needs quality downtime to recover. When you sleep the recovery process is made possible by the release of hormones. Cell phone radiation perturbs the release of these hormones, not only upsetting your sleep pattern but also attacking your immune system.
4. **Keep your cell phone use to a minimum when you are feeling tired and run down.** Think of cell phone radiation as a toxin just like any other toxin. If you're feeling under the weather, the radiation can make you feel more tired and weaken your organism further.
5. **Avoid carrying your phone directly on your body.** Some phones, like iPhones, emit radiation even when switched off. Flight mode is a safer alternative, but better to avoid carrying your phone on your body. Even on standby your cell phone communicates at full power with the nearest cell phone tower regularly to ensure it has the best signal possible. If you are in a poor signal area, it may transmit every 30 seconds to try and get a better signal. If you do have to keep your cell phone next to your body keep it away from major organs.
6. **Make sure you use your phone only in conditions of optimum reception.** Try to use it outside or near a window as much as possible and avoid using it in a basement, underground station, elevator etc. There is no industry standard on the meaning of the signal bars on cellphones but you are best advised to only telephone when all the signal bars are showing, some phones can ramp up their emissions 1000-fold in areas where the signal is poor. This means that for each signal bar that is missing your exposure increases several hundred times.

My best advice: only use your cell phone in emergencies. If you do use it text don't talk to minimize your exposure. If you carry it on your body make sure its on airplane mode.

Avoidance Tips For Your Environment

How to reduce your exposure:

- **WiFi in the home** – a WiFi installation exposes you to radio frequency (RF) radiation 24/7. It travels through walls and roofs with hardly any signal strength reduction. Studies show that RF radiation of this type has adverse health consequences. The solution is simple. Replace your WiFi installation with wired Internet. Wired routers are faster and safer (in terms of data transmission) than wireless ones.
- **Electrical transformers** – cellphone and cordless phone chargers and laptop chargers are often the highest source of electrical fields in the home (Tomitsch, 2009). Many people sit with the transformer a few inches from their body. They emit high electrical fields even when they are switched off. Ideally keep them at least 3-5 feet away.
- **Cordless DECT phones** – Hardell (2003, 2004, 2005, 2006) has found that the health risks are similar to cell phones. **Because of the way these phones are used cordless phones can be more dangerous than cell phones.** Remember most cordless phones emit radiation both from the base and from the handset. EMFs are being emitted even when the phone is not being used. Mortazavi (2007) found they lead to attention and concentration disorders. Replace with classic wired phones.
- **Main home power meter** – (also known as fuse box, load centre) make sure you do not sleep against a wall that has a power meter nearby, even if it's the other side of the wall. Magnetic fields are usually very high and they are very difficult to shield. Aim to be at least 6 feet away.
- **Power lines**- Draper (et al 2005) found that proximity to power lines caused a doubling of the risk of childhood leukemia even at 600m. Fazzo (et al) showed an elevated risk of all cancers. Avoid spending time near them. The 'safe' distance depends on the volts and current they are carrying. You can ascertain your exposure by using an EMF meter.
- **Cell towers** – some experts say 'keep a safe distance'. 400m is often considered a safe distance. The truth is there is no safe distance, all that can be said is that as a general rule the further you are from a cell tower the better its likely to be for you. Much depends on the power levels and to what extent you are caught in its direct beam. An EMF meter will tell you your exposures.
- **Computers** – emit EMFs of many different frequencies. Ground your computer and computer screen and wrap your CPU in aluminum foil (careful not to smother the cooling fan). If it's a desktop PC move the CPU as far away from where you sit as the wires will allow (see below for more information).

- **Cell phones-** put a sticker on your front door reminding people to switch their phones off when they come in your house (see below).
- **Microwave oven-** a significant source of magnetic fields and RF radiation. When I say significant, I mean generally speaking the EMFs from a microwave oven are much higher than any other household appliance or even any external source. Replace your microwave oven with conventional cooking equipment.
- **Hairdryers-** emit high levels of electrical fields. Use a wall mounted model with an extension hose. Or avoid using your existing model in the evening.
- **Metal beds and metal spring mattresses-** become easily magnetized, and they also act as an antenna for any ambient EMFs. Replace with an unsprung mattress and a wooden bed frame.
- **Electric bedside alarm clocks-** best avoided, many of them give off high levels of magnetic fields at the time when you are most vulnerable (nighttime) thereby impeding melatonin production. Use a battery clock instead.
- **Wireless burglar alarms-** they elevate the level of electrosmog in your home. Replace your wireless burglar alarm with a wired security system or infra-red (some people also react to infra red).
- **Wireless baby alarms-** replace your DECT version with an analog model or better still go for a wired version.
- **Wireless Games Consoles-** consoles like the Nintendo Wii, Xbox 360, Sony Playstation emit significant levels of RF radiation and the transformer units on these devices emit high electric fields. Prefer wired versions of these consoles (possible with the Playstation) and switch these units off when not in use.

EMFs From Other Sources



So far I've mainly talked about internal sources of EMFs, i.e. things inside your home or office which create EMF pollution. Nine times out of ten this is the most important form of pollution because of 'proximity to source'. EMFs fall off significantly with distance so even if you live only a few meters from a very high EMF source such as an electric substation your exposure is probably less than from the clock radio, a much lower EMF source, which is 6 inches from you bed.

But it's possible that EMFs external to your home are an issue. This is much more difficult to deal with because you have no direct control over the source – the utility and Telecom companies decide.

EMFs fall off significantly with distance

Cell phone towers and overhead power lines are the most common problems. There are no hard and fast rules for this. As a rule thumb, if you live under power lines or within or are in direct line of a cell phone tower that is under 400m away you should consider shielding all or part of your home.

EMF Measurement

Buying an EMF meter might sound too much like a school science project but obtaining reliable readings of the EMF levels in your environment is the first step in properly dealing with this issue. You've heard the expression 'seeing is believing' - as far as EMFs goes this is truer than ever.

When you can actually measure the RF radiation that your cordless phone or your router/modem is emitting 24/7. When you can actually see your EMF meter go off the scale when you switch on your microwave oven. Or when you realize that your bedroom is full of EMFs because your neighbor has their WiFi router in the room on the other side of the wall to your bedroom. It then becomes very difficult to not take action.

EMFs are this shapeless, silent, invisible force. Having an EMF meter brings them into the real world. The EMFs become more than just a worry or an unpleasant feeling, they become something that can be measured and dealt with.

Unless you have meter readings to go on you're working in the dark

When I first became electrically sensitive I skirted around the issue of buying an EMF meter for a long time. For about two years. It was my way of dealing with my condition. I pretended to myself that the EMFs I could feel weren't there.

Buying an EMF meter would have meant that I would have to deal with them so I kept putting it off. Don't make the same mistake as me.

Only an EMF meter can tell you what levels of EMF pollution are in your environment

You want to be able to measure; AC magnetic fields, electric fields and radio frequency radiation/microwaves and intermediary frequencies (dirty electricity).

AC Magnetic Fields

AC is short for alternating current; the electricity supply in your home will be an AC supply. Magnetic fields can be found wherever current flows. And the more current flows the stronger the magnetic field becomes. Magnetic fields can be found around devices like TV screens (older models tend to give off higher levels), clock radios, computer monitors/disk drives, electric typewriters, electric

ovens and lots of other common appliances in your home, office and car... not to mention transformers and power lines near the home. Your household wiring should not emit high levels of AC magnetic fields unless there is a fault, which is not uncommon. **AC magnetic fields are usually measured in milligauss (mG).**

AC Electric Fields

Electric fields are made by variations in voltage. The field becomes stronger at higher voltages. An electric field will exist in a wire if there is no electric current flowing through it. Computer monitors, TV's, fluorescent lights, improperly grounded electrical equipment, and electric blankets (especially if the polarity is reversed) – can give surprisingly high readings even when switched OFF, if plugged in! **AC electric fields are usually measured in volts/meter (V/m)**

Radio Frequency (RF) Radiation

As the name implies these are high frequency EMFs. These EMFs are transferred through the air; the term “wireless” is often used. Cell phones, cell towers, smart meters, cordless phones, WiFi router/modems are typical examples of devices that use this technology. But increasingly it is being introduced in our cars (for tracking), in our homes, in the form of smart devices (cookers, fridges, washing machines etc.) and in the workplace (smart phones, pagers etc.). **Radio frequency radiation is best measured in volts/meter (V/m) or microwatts/m² (μW/m²).**

This is the most insidious form of EMF pollution. These EMFs are literally everywhere.

You could be sat on your own on a straw bail in the middle of a cornfield with no buildings or any other sign of civilization in sight and yet you could still be unknowingly zapped.

What's The Best EMF Meter?

That's the 64 million-dollar question. It seems like a simple question but unfortunately there's no simple answer. With EMF meters there's no “one size fits all”. The electromagnetic spectrum is vast; no one meter can measure everything. So ultimately you will probably need to buy several meters. But initially concentrate on buying just one meter.

The ‘best’ EMF meters are the most sensitive EMF meters because they give you the most information.

These are professional meters, which have a high degree of sensitivity and accuracy but also require specialist knowledge to be used properly. But most people are not electrical engineers and most people are not ready to pay \$25000 to buy a meter.

There's something else you need to understand.

No EMF meter is as sensitive as your own body.

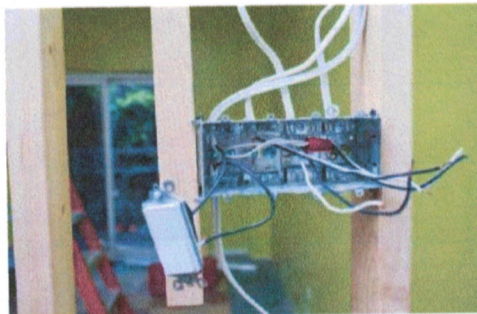
None. What makes a good EMF meter is that for a reasonable price you have sufficient sensitivity to obtain reliable readings.

Before you consider buying a meter:

1. get clear on what you want to measure, e.g. cell tower radiation? EMFs from wiring? WiFi?
2. establish a budget

I've tested and reviewed a number of different EMF meters on my website. These are not necessarily the 'best meters' you can buy. But they are meters that do what they say and represent good value for money. A word of warning: there are some cheaper meters on the market which are so inaccurate and so insensitive they are an absolute waste of money.

Dealing With EMFs In The Home



The two main sources of EMFs in your home are:

1. Your **electrical wiring**.
2. Your **electrical appliances**.

Go around your home, room by room with your EMF meter switching appliances on and off and identify the sources of EMFs in your wiring or appliances. Then act to reduce or eliminate the source.

This will usually involve:

- a) Eliminating the source, for instance replacing a cordless phone with a corded version.
- b) Changing the way you interact with the source, like turning off the cordless phone when it is not in use.
- c) Protecting yourself from the source. For instance applying shielding materials if the cordless phone is in your neighbor's apartment.

Shielding Your Home From EMFs

Shielding your home from external sources of EMFs should only be undertaken once you have dealt with the EMFs from all the internal sources, as described above. I see so many people get totally hung up about an external radiation source when the most pressing problem is the EMFs being generated by appliances inside the home.

The most common EMF pollutants outside the home are cell towers. Other possible external sources of RF radiation are digital TV, a neighbors' WiFi and military radar.

Shielding is not something to be undertaken lightly.

BEFORE even considering shielding look what your EMF meter says. It sounds obvious but you ONLY want to shield from external EMF sources if you're sure the external sources are a genuine problem - its not because you live near a cell tower that there is necessarily a problem.

A sensitive RF meter will help you get clear on this.

For your shielding to be effective you need to be methodical and you need to use appropriate materials. If you're on a limited budget the most important part of your home to shield is your bedroom. Shielding usually involves specialist:

1. nets and
2. paints.

Typically you will paint your walls and ceiling with EMF shielding paint and use EMF shielding film or nets on your windows. First shield your bedroom. If after a few months there's no significant improvement in your health, shield any other room where you spend significant amounts of time.

Make EMF Protection A Priority

Face the facts cell phones, cell towers, WiFi, smart meters, wireless video games, computers etc. are proliferating. This is not going to change any time soon.

EMF exposures are growing day by day

We know that EMFs have the potential to cause great harm. Thousands of studies point to the dangers. Scientists from around the world are ringing the alarm bell:

"The greatest polluting element in the earth's environment is the proliferation of electromagnetic fields."

EMF pioneer and Nobel prize nominee Dr. Robert Becker

"Most of the twentieth century diseases of civilization, including cancer, cardiovascular disease, malignant neoplasms, diabetes, and suicide, are not caused by lifestyle alone....these disease are now increasing in direct proportion to our increasing exposures to high technology electrical devices."