



Wi-fi (Wireless Networking)

Wireless networking has been steadily growing in popularity over the last few years and is now in millions of homes, shops, schools, offices and other places throughout the UK.

Wireless Routers and Homehubs are found in living rooms, bedrooms, next to desks and near to laptops and PCs that connect to them.

They are taken for granted as an everyday item and barely even considered beyond that.

(N.B. The latest craze for "Mobile Internet" using plug-in USB "dongles" that connect to 3G Mobile Phone networks carry almost identical risks to Wi-fi-enabled computers plus some of the risks associated with Mobile Phones and Mobile Phone Masts too.)

What's Wrong With Wifi?

Wi-fi devices and routers have a range of up to 100 meters or so using **microwave** signals which can penetrate solid brick walls and flesh 24 hours a day, seven days a week whilst powered. As well as wireless routers and/or modems Wi-fi is used by Homehubs and security cameras etc.

Wireless computers, laptops and routers **constantly emit pulsed microwave radiation** over (and through) peoples' bodies even when not being actively used (as long as they are still switched on)– so this radiation is present all the time - not just occasionally.

Additionally Wi-fi is slower than wired networks, it is inherently insecure – even with encryption. Wi-fi is notoriously unreliable – often 'dropping' its connections part way through downloads. **Wi-fi has never been pre-market safety tested.**

Ill health effects have been linked to Wi-fi. Some people in or near buildings using Wi-fi find they get many common symptoms including **heart flutters**, lots of **headaches**, **nose bleeds**, **problems sleeping**, **itchy burning skin** and feel really **depressed**. Some teachers have become unable to teach in proximity to Wi-fi.

Wi-fi gives out the same sort of microwave radiation in their signals as microwave ovens use to cook food, and often uses exactly the same frequencies.

Unfortunately the UK Government's Safety guidelines only protect us from being heated (cooked) by the microwaves – they've ignored the evidence that microwaves can harm us in other ways, biologically, without making us hot.

Although the 'dream' of working in your garden is often promoted by Wi-fi equipment vendors, the actual reality of manoeuvring the laptop screen away from glare, the extra eye strain, the obvious distractions and the British weather mean that this is almost always impractical. In reality, in our experience, almost all computer use is done sitting at a desk adjacent to the incoming internet modem, using power from the mains.

Wi-fi systems use similar information carrying microwaves at comparable frequencies to **Mobile Phone Masts**.

Many German and European doctors (equivalent to our GPs) are so concerned about Mobile phone Masts and similar technologies that they have signed petitions such as the "Freiburger Appeal" to demand that Governments take the other health concerns over such technologies more seriously.

These Doctors have noticed more and more of the following **health problems** occurring in proximity to microwave transmitting technologies:-

* **Learning problems** * **Trouble concentrating** * **Behavioural disorders** such as Attention Deficit Disorder (ADD)
* Extremely high and extremely low **Blood Pressure** – and swapping between the two * **Medicines stop working as well**, so prescriptions have to increase * **Heart Rhythms** get upset * Sudden **Heart Attacks** and Strokes happening in younger and younger people * **More Brain diseases** such as **Alzheimer's**, **Parkinson's**, **Motor Neurone Disease** and **Epilepsy** * **More Cancers**, **Leukaemia** and **Brain Tumours** * **More and worse Headaches and Migraines** * Constantly being tired, **getting sleepless and being sleepy** during the day * **People feeling anxious** all the time * **ringing in the ears** (Tinnitus) * **People more likely to get infections, colds, allergies and viruses** * **People feeling pains in their nerves and bodies** for no apparent cause.

When Doctors in a town in Germany (West Kempten) decided to prove that it was the Mobile Phone Mast that was causing these problems they took lots of blood samples from people before and after a new mast was put up and turned on. The people also stopped using their mobiles, cordless phones, wireless internet and other wireless/mobile gadgets too.

The results were very clear. The levels of two vital chemicals serotonin and melatonin found in the blood were found to be seriously altered once the mast was turned on.

Serotonin levels were halved. Serotonin controls your mood, anger, aggression, body temperature, sleep, sexuality, appetite and metabolism. Many of the people found themselves feeling moody, depressed, tired, and lethargic. Some also felt agitated and had lost their appetites. Nearly all felt really down.

The people's Melatonin levels were too high during the day and much too low at night. Melatonin is a hormone that is important in boosting the immune system and fighting cancer. It protects your DNA from damage. Since it also helps regulate sleep you want it high at night time otherwise you will be restless at night and tired during the day. If your immune system isn't boosted enough you will become ill easier, stay ill longer and can't fight cancer so well.

The Doctors wanted the Mobile Phone Mast to be turned off again.

In another town in Germany (Naila) Doctors looked at nearly 1000 medical records. They realised that patients who had lived within 400 metres of a mast for 10 years were much more likely to get cancer than those further away. Patients fell ill with cancer nearly 8 years younger. 5 years after the mast was installed the chance of people getting cancer near to the mast was 3 times higher than it was for people further away. Other studies have shown the same kind of pattern.

Some Scientists have also found that levels of nitric oxide and calcium ions in the body are upset by microwaves. Too much nitric oxide can lead to Multiple Sclerosis, diabetes and cancer, whilst too little can cause high blood pressure and damage your arteries.

Calcium ions are used by cells to communicate. If they leak out of cells they stimulate cancer cell growth. If too many get into cells the cells get damaged and your DNA gets broken up. This damages fertility.

What Can I do?

It is all very well for us to say Wi-fi isn't safe for people to use, but you may have been sent a wireless router by your Internet Company (ISP) and are unaware of the alternatives.

You can easily replace the supplied wireless router with a stand-alone modem or wired router. If the wireless router has RJ-45 (phone-style) connectors and can be switched over to work without the wireless output, you may already be able to set up a non-wireless network.

If you only have one PC that you need to connect, you can just connect the ADSL modem into the PC directly and remove the need for a network at all, though it is essential to have a software firewall in this case. An ADSL Router is inherently more secure as it effectively acts as a firewall.

If you need a small network, you can manage easily enough by running a long CAT5e or CAT6 cable (carefully - the wires are brittle) between rooms, running the wires under any carpets as necessary, and just use the wired router in conjunction with the cable / ADSL /broadband modem. Many companies sell wired routers and ADSL modems^[14].

For offices (or class rooms) etc. that require floor boxes there are suppliers who can supply these^[14].

For those who are not willing or are not able to cable up various rooms in your house or school (where you would intend using a laptop) with networking sockets, there is a more secure and stable alternative, at pretty much the same price: dLAN units allow you to use the buildings mains circuitry as an extension to your computer network, so all you have to do is plug one dLAN unit into the wall (and network to your router / wired network) and the whole building is networked. Plug the other unit into any other socket on the same power circuitry, and instantly, you have a new network connection. Because the network traffic is still travelling down wires, and it doesn't get out beyond the house's consumer unit, the network is secure from those that do not have physical access to the house itself. It can also carry a higher bandwidth than a wireless network (typically 80 MBit/sec).

So there really is no need to use Wi-fi anyway, barring the convenience of not having to plug your laptop into anything at all (but for those that need a mains socket anyway, dLAN just uses one extra cable from the same socket as the laptop adaptor). For schools, we would recommend wiring up all the classrooms that need to have network access, preferably by putting the power and network cabling through the same trunking. If done by IT staff, this can be cheaper than wireless networking equipment anyway. If there is no-one capable, or allowed (perhaps on health and safety grounds), again dLAN is the next best option as this reduces the need for expensive sub-contracting work.

N.B. dLAN is not a serious option for most people who are ElectroSensitive (ES) or ElectroHyperSensitive (EHS), since the extra network signal on the wire can cause some or all of their symptoms.

We would always advise a truly wired solution in preference to dLAN or Wi-fi.

If you need to protect yourselves from Wi-fi from neighbours (remember microwave radiation from Wi-fi can extend for up to 100 metres, so it is not just your immediate neighbours from whom you may be receiving Wi-fi signals), there are shielding materials that stop much of the microwave radiation. Select the "Screening" section from the website below for more details, and tell others about this too.

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www.nomasts.org.uk