

## What is Wi-Fi?

Wi-Fi stands for Wireless Fidelity, and is a term used to describe the way computers can connect to a network without the need for cables. Instead, the connection is made using microwave radiation, along which the data are sent in pulses.

This is relatively new technology that has taken off at a rapid pace. The first wireless systems were developed in the early 1990s (such as WaveLAN); however, it was not until 1999 that wireless technologies were widely accepted. The most common 802.11g protocol has only been around since 2003.

## Is the radiation emitted from Wi-Fi safe?

Because there is such a high demand for wireless convenience, the rate at which Wi-Fi technologies are being deployed exceeds the rate at which researchers can study its long-term effects on humans.

Although no studies have specifically looked for health effects from Wi-Fi, there is a growing amount of scientific research on related wireless technologies that suggests possible adverse health effects.

A survey of this research, conducted by Powerwatch in the UK, found a number of significant health effects from mobile phone masts (which use a frequency from 0.9 to 2.1ghz, close to the 2.4ghz used for Wi-Fi). There is, in fact, very little research looking at phone masts that has failed to find an effect.

The number of studies and research papers that point to adverse effects from wireless technologies has prompted a number of leading scientists and organisations to advise a precautionary approach to the use of wireless devices.

## What are the health effects?

People may be affected in many different ways. Reported health effects from this type of radiation are one or more of the following:

**Neurological:** headaches, dizziness/nausea, memory and concentration difficulties, insomnia, depression/anxiety, fatigue/weakness, numbness/tingling, muscle and joint pains.

**Cardiac:** heart palpitation, arrhythmias, high blood pressure.

**Eyes:** pain/discomfort, poor vision, cataracts.

**Ears:** ringing in the ears, hearing loss.

**Other:** skin problems, dry eyes, nosebleeds, impaired sense of smell.

Research has also pointed to possible **long-term effects** – including cancer, heart disease, genetic effects such as miscarriage and birth defects, diabetes, thyroid dysfunction, and reproductive problems.

It is also known that the body of a younger person is more sensitive to possible long-term effects of radiation, which are of particular concern.

## Aren't there safety standards?

Most nations set safety standards for radiation based on short-term effects (such as burns, burning or heating of the body over a period of time).

These guidelines were last updated in 1998 (before Wi-Fi was widely used), and as they do not address the long-term effects that are of concern to so many people, they need to be reviewed.

Despite there being calls for a review, at present most safety standards for wireless technologies are based on government safety standards from the 1990s.

## Who are the experts on wireless technologies?

Probably the most well-known expert is the UK Health Protection Agency (2000), published by a committee of the Government to look into the health effects of electromagnetic fields. The committee was chaired by Professor John H. Stammers (former chief scientific adviser to the government, now chairman of the Health Protection Agency).

## What other devices emit microwave radiation?

There are many other devices that emit the same radiation as Wi-Fi. These include:

- DECT (digitally enhanced cordless telecommunications) and DECT-style baby monitors. Most of these devices emit pulsing microwave radiation from their base station (even when the phone is not being used), and are frequently placed by the bedhead or on the work desk.
- wireless home entertainment systems and game consoles (also known to emit microwaves even when switched off)
- some wireless security/alarm systems
- wireless interactive whiteboards and paging systems.

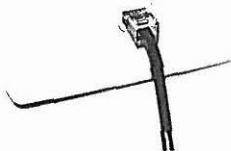
## What should I do to reduce my exposure?

Due to the increasing concerns over the possible hazards from the use of wireless networks (and similar wireless technologies), the best way to reduce your exposure to unnecessary microwave radiation is to use cables wherever possible.

The other advantages of cabled networks are speed (Wi-Fi is slower than wired networks), security (Wi-Fi is insecure – even with WEP or WPA encryption) and reliability (Wi-Fi is often known to drop connections).

If it is not possible to remove your wireless connections, it is advised that you take other precautions:

- do not sit in close proximity to a wireless router (keep it in an unoccupied room if possible)
- turn off any wireless devices at night time while you sleep – as these devices emit microwaves at all times – not just when the device is transmitting data.
- avoid using a wireless laptop on your lap for extended periods of time
- take note of the short-term health effects – if you notice any symptoms try to remove or reduce your exposure to the wireless device.



## Where can I get more information?

Visit the following websites to get more information, including the reports referred to in this document:

[www.bioinitiative.org](http://www.bioinitiative.org)  
[www.emfacts.com](http://www.emfacts.com)  
[www.energyfacts.com](http://www.energyfacts.com)  
[www.healthandenvironment.org](http://www.healthandenvironment.org)  
[www.hese-project.org](http://www.hese-project.org)  
[www.icer.org](http://www.icer.org)  
[www.iegmp.org](http://www.iegmp.org)  
[www.mastsandantennas.org](http://www.mastsandantennas.org)  
[www.powerwatch.org](http://www.powerwatch.org)  
[www.radiationandhealth.org](http://www.radiationandhealth.org)

Produced by

**EMFacts**  
[www.emfacts.com](http://www.emfacts.com)

## Untested and Unregulated

“Wi-Fi” is the term given to the wireless transmission of **internet signals**. It uses radio frequency microwave radiation (RF/MW) to operate and communicate. **Cell phones, cell towers and antennae, portable phones and Wi-Fi** all utilize and emit similar **Radio-Frequency Radiation**.

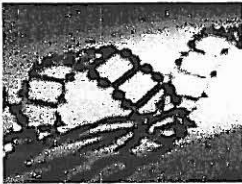
Damaging **health effects** are undeniable, and scientifically shown to occur at levels thousands of times below existing public safety limits.

Reputable scientists state that our **standards are obsolete** because they are based solely on thermal effects.

## Radiation - Use with Caution

*“Exposure to cell phone radiation is the largest human health experiment ever undertaken without informed consent.”*

Lloyd Morgan, Electronics Engineer (Ret.)  
USA Bioelectromagnetics Society



*“This is damage to the human genome, and can lead to mutations which can be inherited, or which can cause cancer, or both . . . The rapidly expanding development of new wireless technologies and the long latency for the development of such serious diseases as brain cancers means that failure to take immediate action to reduce risks may result in an epidemic of potentially fatal diseases in the future.”*

“Public Health Implications of Wireless Technologies”  
Sage/Carpenter – Pathophysiology, 2009

## Electrohypersensitivity

EHS is receiving **international** emerging public health protection and Norway as a function.

The Canadian Human Rights with Disabilities Act and recognize EHS as an Environmental

The **Power Watch Handbook** and 35% of our population electromagnetic frequency grow with continued exposure.



## EHS Sensitivity Symptoms

**Neurological:** headaches, concentrating, memory loss, irritability, numbness, tingling, anxiety, stress reactions, dizziness, muscle spasms, joint pain

**Respiratory:** allergies, asthma, bronchitis, pneumonia . . .

**Cardiac:** pain or pressure, shortness of breath, low or irregular heart rate, arrhythmia . . .

**Other:** sleep disturbances, altered immune response, problems, blood sugar fluctuations, symptoms, skin rashes, flu-like symptoms, nosebleeds, impaired sense of appetite, tinnitus, hearing, mood changes, thyroid imbalance

*“Relief can be obtained by avoiding radiation emitting devices and other wireless technologies.”*

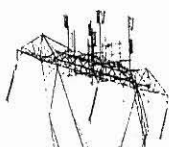
EHS Awareness Program  
Mayor of the City of

## Insurance Coverage?

*Ion-Thermal Effects Confirmed  
Exposure Limits Challenged  
Precaution Demanded . . .*

*. All across Europe, the debate on exposure limits has flared up; insurance companies do not insure cell phone providers because of the incalculable health risks."*

Austrian Insurance Company (AUVA)  
Report confirming health risks associated  
with wireless technologies - July 21, 2009



## Protecting the Public

Germany warns citizens to avoid Wi-Fi due to health risks – September 2007

Russian Radiation Protection Agency gives urgent warning to defend children's health from RF/MW - April 2008

Five public libraries in Paris shut down Wi-Fi due to health concerns - May 2008

European Parliament votes to bring in stricter radiation limits - September 2008

City of Herouville St. Clair, France removes Wi-Fi from primary schools due to health risks - April 2009

Teachers in UK call for immediate dismantling of Wi-Fi in schools due to health risks - April 2009

Sorbonne University, Paris passes moratorium on Wi-Fi - May 2009

Los Angeles School District votes unanimously to protect children from ELF and RF/MW – May 2009

Israeli Minister of Environment gives public warning on radiation emitting devices including Wi-Fi - July 2009

**WE BELIEVE** a profound need to protect the unsuspecting public, especially from electropollution in our environment.

A growing percentage of our population is uncomfortable and damaging physical health from cellular and wireless technologies. Thousands of scientists and doctors have documented research and assert in documented research that Wi-Fi and its related technologies are unsafe.

Our goal is to raise awareness of the public is empowered to protect their children while demanding removal of unsafe technologies.

## What You Can Do

- Care enough to **share this info**
- **Hardwire** your home computer
- **Protect youth** by requesting that **school/college** hardwire
- Request that **businesses** using Wi-Fi **Radiation Exposure** signs allow concerned individuals to **avoid involuntary exposure**
- Request all levels of **government** protect the public by enacting **stricter** standards as recommended in **BioInitiative Report**.

## Websites and Resources

[www.bioinitiative.org](http://www.bioinitiative.org)  
[www.wiredchild.org](http://www.wiredchild.org)  
[www.weepinitiative.org](http://www.weepinitiative.org)  
[www.wifiinschools.org](http://www.wifiinschools.org)  
[www.powerwatch.org](http://www.powerwatch.org)  
[www.mastsanity.org](http://www.mastsanity.org)  
[www.magdahavas.com](http://www.magdahavas.com)  
[www.microwavenews.com](http://www.microwavenews.com)  
[emf.mercola.com](http://emf.mercola.com)

- BioInitiative/Interview Cindy Sarno
- Magda Havas and Camilla Rees  
**Public Health SOS: The Shock of The Wireless Revolution**
- Dr. George Carlo - research, book
- See movie: Full Signal