

# Femtocells and Health



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This brochure has been designed to answer questions you may have about femtocells. We have all read or heard about concerns raised from time to time regarding the safe use of radio waves and wireless communications equipment. The wireless industry takes these concerns seriously and welcomes ongoing research. The consensus of international health authorities today is that there are no established health effects from low power wireless communications devices such as femtocells.

## **What are Femtocells?**

Femtocells are low-power access points that can combine mobile and Internet technologies within the home. The femtocell unit generates a personal mobile phone signal in the home and connects this to the operator's network through the Internet. This will allow improved coverage and capacity for each user within their home.

Femtocells have an output power less than 0.1 Watt, similar to other wireless home network equipment, and will typically allow up to about 4 simultaneous calls/data sessions at any time. Mobile phones connected to a femtocell will typically operate at levels similar to other wireless phones used in the home.



## **What research has been undertaken?**

Femtocells emit very low levels of radio waves (also known as radiofrequency (RF) electromagnetic fields) when being used. The safety of radio waves has been extensively studied for more than 50 years. Numerous independent scientific expert panels, health agencies and standard-setting organisations

around the world regularly review this large and growing body of research. These organisations have all reached the same general scientific conclusion: that there are no established health effects from exposure to radio waves below the limits applicable to wireless communications systems.

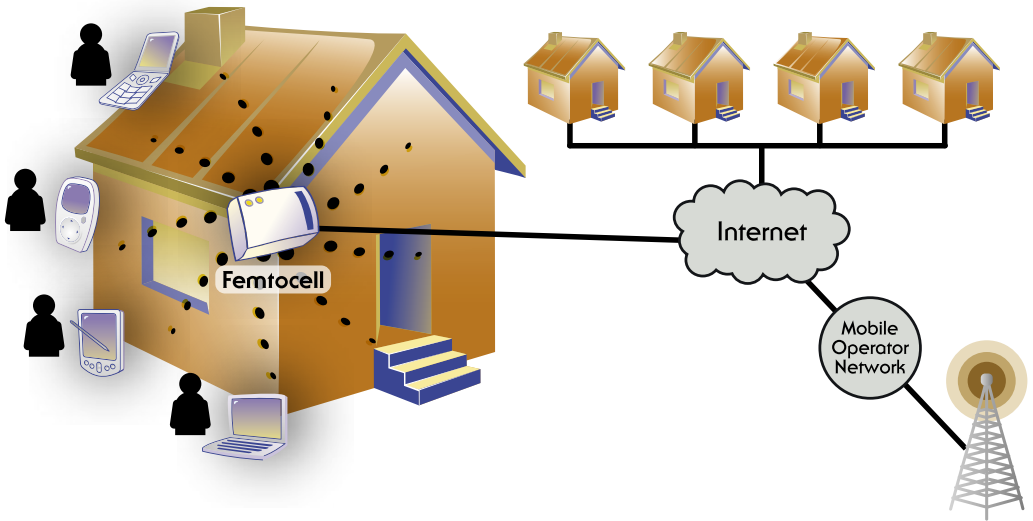
### **Are there safety limits for exposure to radio waves?**

Yes. Femtocells must comply with the same safety limits that are applied to other wireless devices such as mobile phones and their antenna sites. These safety

limits have been established by the International Commission on Non-Ionizing Radiation Protection (ICNIRP). They have been endorsed by the World Health Organisation (WHO) and widely adopted by governments around the world.

### **What about children?**

The health and safety of children is important to all of us. Substantial safety margins are incorporated in the standards with which femtocells and other radio and wireless products must comply. These safety margins provide protection for everyone, including children.



## Do Femtocells comply with RF exposure requirements?

Yes. Femtocells are designed and tested to ensure that they conform to both internationally recommended safety limits, and to the regulations adopted by governments around the world.

## Where can I obtain further information?

To find more information, please visit any of the following websites:

- WHO [ [www.who.int/peh-emf](http://www.who.int/peh-emf) ]
- ICNIRP [ [www.icnirp.de](http://www.icnirp.de) ]
- Mobile Manufacturers Forum [ [www.mmfai.org](http://www.mmfai.org) ]
- GSM Association [ [www.gsmworld.com/health](http://www.gsmworld.com/health) ]
- Femto Forum [ [www.femtoforum.org](http://www.femtoforum.org) ]



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