

## Sources of Electromagnetic Pollution



### The Electropolluted Children's Room

Radio alarm clock and CD player produce strong magnetic fields. Unshielded bedside and clamp-on lamps generate high electric fields. This type of electromagnetic pollution puts stress on the body, especially during the essential sleep phase. In addition, compact fluorescent lamps also emit RF radiation, an exposure that mostly has been neglected so far.

Therefore, avoid sources of electromagnetic pollution near your bed.



➔ Unplug electric devices in sleeping areas at night.

➔ Avoid DECT cordless phones and Wi-Fi networks anywhere in the home.

**Power Density Level (peak value)** at a distance of:

- 30 cm ca. 200.000  $\mu\text{W}/\text{m}^2$
- 1 m ca. 20.000  $\mu\text{W}/\text{m}^2$
- 5 m ca. 800  $\mu\text{W}/\text{m}^2$

**DECT/GAP  
Cordless Phones**

➔ Turn off cell phones at night; never place them under the pillow (magnetic pulses).

➔ Pay also attention to RF exposures from cell phone towers. You may wish to have the RF exposure level professionally tested by e.g. a qualified (building biology) testing specialist and, if necessary, have remediation suggestions provided.

## RF Radiation



Cell phone towers (GSM and UMTS/HSPA), DECT cordless phones, and Wi-Fi access points constantly emit microwave radiation.

This type of radiation penetrates normal walls and ceilings almost unimpeded.

The radiation exposure from an UMTS/HSPA antenna may result in the impairment of well-being. (e.g. TNO study 2003 Netherlands)



UMTS/HSPA Plug-in Card for Notebook



Cordless Phone



UMTS/HSPA USB Mini Modem



Wi-Fi Access Point



Microcell at Gutter



Cell Phone Antennas on Rooftop of House

## Did you know that...



- ➔ More calls on a cell phone mean more cell phone antennas.
- ➔ The transmitting power increases up to five times during the download of pictures and videos using UMTS/HSPA, thereby also increasing the user's radiation exposure.
- ➔ While actively using a cell phone, the RF exposure is higher in cars, trains, and buses compared to outdoors.
- ➔ In the basement, a 1,000 times higher RF transmitting power is required for cell phone reception.
- ➔ 19% of adults reported being able to detect electromagnetic pollution exposures in a Salzburg environmental study from 2002.
- ➔ As a precaution, electromagnetic pollution exposures should be avoided in order to prevent electromagnetic hypersensitivity.

### RF Radiation Level below Cell Phone Antenna Shows High Fluctuations



**1 Lighthouse Effect:** The direction of the antenna's main beam is tilted slightly downward. Thus a surface close to the ground and with the largest area possible can be covered with wireless radiation.

**2 Undesirable:** The residence should actually be situated in the radio shadow. Due to a variety of side effects, sometimes surprisingly high RF radiation levels occur.

#### Literature

How Susceptible Are Genes to Mobile Phone Radiation?  
Kompetenzinitiative  
<http://www.broschuerenreihe.net/international>

Environmental Medicine Evaluation and Electromagnetic Fields  
Dr. med. Gerd Oberfeld  
[http://www.baubiologie.net/uploads/media/VDB\\_Environmental\\_Medicine\\_Evaluation\\_of\\_Electromagnetic\\_Fields\\_english\\_01.pdf](http://www.baubiologie.net/uploads/media/VDB_Environmental_Medicine_Evaluation_of_Electromagnetic_Fields_english_01.pdf)

Stress durch Strom und Strahlung [Stress Caused by Electricity and Radiation]  
Wolfgang Maes, ISBN 3-923531-22-2

#### Internet

[www.baubiologie.net](http://www.baubiologie.net)  
[www.bioinitiative.org](http://www.bioinitiative.org)  
[www.salzburg.gv.at/umweltmedizin](http://www.salzburg.gv.at/umweltmedizin)  
[www.microwavenews.com](http://www.microwavenews.com)  
[www.kompetenzinitiative.net/international](http://www.kompetenzinitiative.net/international)  
[www.powerwatch.org](http://www.powerwatch.org)  
[www.icems.eu](http://www.icems.eu)  
[www.emfacts.com](http://www.emfacts.com)

Images [www.pixquelle.de](http://www.pixquelle.de)  
Layout Christian Ebert



Health at Risk!

# Cell Phone Risk



## Children and Adolescents

With the kind support of





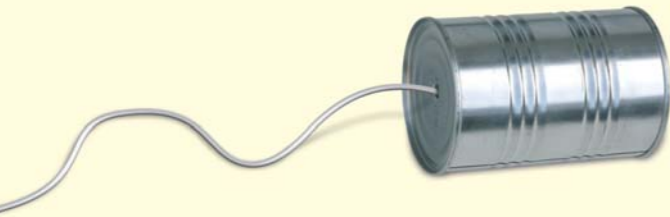
## Foreword

In recent years, wireless communication has expanded at a breathtaking pace. Many people feel their wellbeing and health are being adversely affected.

This flyer offers information and provides suggestions on how to lower your own personal exposure to electromagnetic pollution.

Given our present state of knowledge, there is a problem with exposing – especially children and adolescents – to cell phone radiation. Currently, it is rather difficult to assess the long-term health consequences.

It depends on each one of us to reduce our personal health risk and our neighbors' exposure through our own behavior.



## Info & Imprint

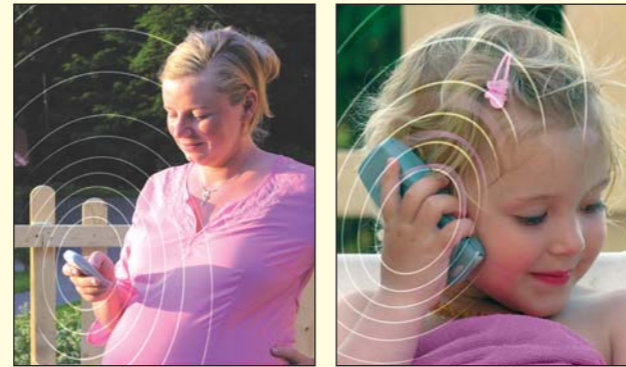
Original German Flyer of the Salzburg Coalition for the Protection from Cell Phone Radiation (Austria) Adapted and Translated into English by Katharina Gustavs, Building Biology Environmental Consultant (IBN) Phone: 250-642-2774, www.buildingbiology.ca

## Baby & Co



As long as a cell phone is turned on, it constantly emits magnetic pulses (also in standby). During a phone call or an SMS message, RF radiation emissions are added.

- Do not put turned-on cell phone in your shirt or pant pocket.
- Avoid cell phones during pregnancy; do not carry them close to your body when turned on.



Cell phones are no toys but a source of radiation.

- Do not place turned-on cell phone in a stroller or let children play with it.
- Do not use baby monitors based on DECT/GAP or Wi-Fi. In the case of analog wireless baby monitors, keep a minimum distance of two meters to the child's bed.
- Always keep a courtesy distance to other people, especially children, while using a cell phone.

Power Density Level (peak value) at a distance of:

– 30 cm	ca. 400.000 $\mu\text{W}/\text{m}^2$	<b>Cell Phone</b>
– 1 m	ca. 40.000 $\mu\text{W}/\text{m}^2$	
– 5 m	ca. 1.600 $\mu\text{W}/\text{m}^2$	

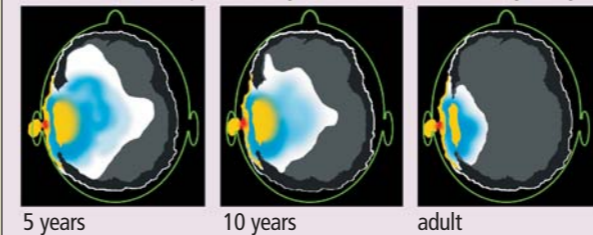
## Children & Adolescents



Cordless phones based on the DECT/GAP standard constantly emit microwave radiation. Generally speaking, they should be avoided in preschools, schools, and especially in residences.

- Corded phones are recommended.

RF Radiation Absorption during Cell Phone Use according to Age



Establish clear rules about cell phone use/ban in house and school regulations.

Laptop use can result in high exposures to AC electric and magnetic fields. If using Wi-Fi, microwave exposures are added.

Power Density Level (peak value) at a distance of:

– 30 cm	ca. 90.000 $\mu\text{W}/\text{m}^2$	<b>Wi-Fi</b>
– 1 m	ca. 8.000 $\mu\text{W}/\text{m}^2$	
– 5 m	ca. 300 $\mu\text{W}/\text{m}^2$	

- It is recommended to install computer labs with shielded power cables and without Wi-Fi.
- Provide information about the social and health risks of cell phone radiation during class.
- Use (air-tube) headsets with shielding and ferrites.
- While listening to music via a cell phone, do not wear it close to your body.

**Attention  
Cell Phone  
Debt Trap**

## Health Impacts



Discussed Symptoms and Health Impacts...

From Cell Phone Use:

- Heat sensation and numb feeling around ear
- Headaches and concentration problems
- Tinnitus (ringing ears)
- Auditory nerve tumor
- Increased permeability of blood-brain barrier with potentially increased risk of Alzheimer's and Parkinson's
- Concentration and memory impairments
- Malignant tumors



From Cell Phone Towers:

- Triggers and intensifies electromagnetic hypersensitivity
- Tiredness, fatigue, sleep disorders, depression
- Irritability, heart palpitations
- Concentration and memory impairments
- Evidence for an increased risk of certain tumors
- Increased susceptibility to infections