



## Radiation Exposure in the Car, Trains, Buses, Trams, Metros, Aircrafts

### Radiation Exposure in the Car from Mobile Phone Usage

The radiation exposure for the passenger of a car using a mobile telephone without an external antenna is very high, especially for children and animals in the car! The mobile phone has signal reception difficulties in the metal cage of a car and therefore must increase the magnitude of radiation by a factor of three in order to ensure that the conversation is not disconnected.

The reaction time after a mobile phone conversation is worse than after alcohol consumption.

The normal breaking distance from 112 km/h of **31 meters** increases by the following:

- to **35** meters after consuming alcohol
- to **39** meters when telephoning with a "hands-free" kit
- to **45** meters when telephoning with the mobile phone at the ear

Source: Ärztezeitung (Doctors' Newspaper) online 8.4.2002

### Radiation Exposure due to Electromagnetic Radiation in the Car Floor Space

In many cars, measurements are performed in the foot floor space to establish the degree to which the body is exposed to electromagnetic radiation. This has become necessary since the automobile industry has been installing more and more electronics in their vehicles.

For information, here are some measurement results that were taken using the same measurement device:

Audi A2:	5000 nT
Audi A4:	ca. 80 nT
BMW:	ca. 20.0000 nT and higher
Mercedes:	ca. 20.0000 nT and higher

For a continuous exposure ca. 120 nT is compatible with the body.

### Trains, Buses, Suburban Trains, Underground Trains as Radiation Traps

Japanese researchers have discovered that using a mobile phone within a train can lead to radiation exposure levels that far exceed international standards. The metal external wall of the wagon reflects the radiation, causing the mobile phone to send an increased signal in order to penetrate to outside. If many passengers are using their mobile telephones at the same time in addition to other radio systems, e.g. Bluetooth, wireless network connection, W-LAN, working on a laptop, then the radiation levels drastically increase inside the train.

Measurements for the ICE are not available from the German Rail AG, but the ICE also has metal exterior and metallic glass panes, making it difficult for the radiation to penetrate externally. In certain wagons, the German rail has installed a so called repeater to boost the signal. Other wagons are designated mobile phone free zones. ÖKO-Test advices: Reserve there and switch off in every way.

Source: ÖKO Test 7-2002



### **Radiation Exposure in Aircrafts**

Radiation exposure from the natural universe is a burden on the human body. Who does not know the sensation after a ten hour flight that the body feels strange? Additionally, in recent times some airlines consider allowing passengers and crew members to be exposed to additional artificial radiation sources, which present an unnecessary radiation exposure to all passengers.

The faraday cage reflects W-LAN and mobile phone radiation. When one considers that after 90 seconds of mobile telephoning the blood has already depolarized, which leads to a reduced oxygen implication, this type of long-haul flight is a particular exertion for the organism.

Who would like to sit close to someone in an aircraft who uses its mobile phone for quite some time and in 20-60 cm distance to your head?

You follow unvoluntarily a conversation, you are exposed to a permanent noise level and in addition you get irradiated significantly.

It is astounding to observe, that when a plane lands at an airport and has hardly arrived at the gate, already a minimum of thirty people have grabbed their mobile phones and switch them on inside the aircraft. It would only be another moment before one left the machine. It would be much welcomed if airports and airlines would act to prevent this behavior. In addition, those who are electrosmog sensitive and indeed those who do not know what electrosmog can do to their bodies, would welcome the reduction or even prevention of the mobile phone and W-LAN usage in aircrafts.