

Electromagnetic Fields

Proposed intensity guidelines for long term exposures¹

Description	Ideal	Weak	Strong	Extreme
Electric fields 60Hz AC				
 Volts/metre V/m	< 1 V/m	1 - 5	5 - 50	> 50
Body Voltage milli Volts mV	< 10 mV	10 - 100	100 - 1000	> 1000
Magnetic fields 60 Hz AC				
 microTesla μT	< 0.02 μT	0.02 - 0.1	0.1 - 0.5	> 0.5
nanoTesla nT	< 20 nT	20 - 100	100 - 500	> 500
milli Gauss mG	< 0.2 mG	0.2 - 1	1 - 5	> 5
Electromagnetic fields Radio & Microwaves				
 microwatts/m ² $\mu W/m^2$	< 0.1 $\mu W/m^2$	0.1 - 10	10 - 1000	> 1000
 European Council				
Inside Exposure :	< 100 $\mu W/m^2$			
Outside Exposure :	< 1000 $\mu W/m^2$			

< = Smaller than



> = Greater than

¹Source: SMB 20024 Copyright © 2008- BAUBIOLOGIE MAES, Schorlemerstr. 87 D-41464 Neuss Tel:02131-43741 www.maes.de
Complies with BioInitiative 2012 recommendations, www.bioinitiative.org

Partial Symptoms Guide¹

50/60 Hz Electric Fields:



- Multiple allergies (and "electrosensitivity")
- Skin disorders
- Nervous system disorders
- Decrease in lymphocytes

50/60 Hz Magnetic Fields:



- Weakened immune system
- Endocrine disorders
- Accelerated cancer
- Leukemia
- Unrefreshing sleep / Sleep problems
- Induction & Resonance Phenomena's

Radiofrequency & Microwave:



- Mental disorientation / Anxiety / Brain fog
- Speech difficulties
- Reflex and reaction-time alterations
- Neurovegetative disorders
- Skin disorders
- Inflammatory reactions

¹ Should you note such symptoms and cannot find any plausible cause-effect relationship after consulting with a physician, consider the possibility of electromagnetic field biological interferences. A thorough electromagnetic fields survey may confirm exposure conditions and determine mitigating solutions. Mitigating source(s) may attenuate or remove symptoms.



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International Electromagnetic Field Suggested Exposure Guidelines

Baubiologie Guidelines for Sleeping Areas, 2008	Ideal	Weak	Strong	Extreme
AC Electric Field in Volts/meter (V/m)				
- Baubiologie	< 1	1 - 5	5 - 50	> 50
- Canada - ICNIRP Occupational				25,000
 - World Health Organization WHO/ICNIRP				4,200
- MPR Sweden			25	
- TCO Sweden			10	
- US Congress recommendation in 1996			10	
- Baubiologie Body Voltage in milli Volts mV	< 10	10 - 100	100 - 1,000	> 1,000
- Human nerve stimulation starting at mV		15		
- Natural background	< 0.0001			
AC Magnetic Fields in nanoTesla (nT) or milli Gauss (mG)				
- Baubiologie	< 20	20 - 100	100 - 500	> 500
	< 0.2	0.2 - 1	1 - 5	> 5
 - Canada - ICNIRP - WHO General Public				83,300 nT
- Canada - ICNIRP Occupational				419,700 nT
- MPR Sweden			250 nT	
- TCO Sweden			200 nT	
- US Congress recommendation in 1996			200 nT	
- Germany DIN/VDE 0107 (EEG)			200 nT	
- Switzerland: (long term occupational)				1,000 nT
- WHO/IARC Class 2B (2001) potentially carcinogenic			300 - 400nT	
- Natural background	<0.0002			
Radio Frequency & Microwaves in microwatts/Sq. meter (μW/m²)				
- Baubiologie	pulsed < 0.1 Non pulsed < 1	0.1 - 5 1 - 50	5 - 100 50 - 1000	> 100 > 1,000
- Canada - Safety Code 6 (2012) frequency dependent  - Exposures for less than 6 minutes				4,500,000 to 10,000,000
- WHO/ICNIRP				95,000
- Germany: DIN/VDE 0848 occupational and general public BImSchV				25,000,000 to 100,000,000
- WHO/IRPA frequency dependent				2,000,000 to 10,000,000
- Salzburg Resolution, MD Association, EEG changes				(Pulsed) 1,000
- European Parliament STOA				100
- USA: ANSI/IEEE frequency dependent				6,000,000 to 12,000,000
- Natural background	< 0.000,001			

ACGIH = American Conference of Governmental Industrial Hygienists
 IRPA/INIRC = International Commission on Non-Ionizing Radiation Protection
 TCO = Swedish Confederation of Professional Employees MPR = Swedish Board for Technical Accreditation
 NCRP = National Council of Radiation Protection and Measurements WHO = World Health Organization

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