

ELECTROMAGNETIC RADIATION EXPOSURE GUIDELINES

(various jurisdictions)

(If not otherwise stated, limits apply to entire frequency range: ca. 600 to 3000 MHz.)

maximum exposure $\mu\text{W}/\text{cm}^2$	country/jurisdiction
	Canada Safety Code 6 (2009) http://www.hc-sc.gc.ca/ewh-semt/pubs/radiation/radio_guide-lignes_direct-eng.php
1000	2400 MHz
1000	1900 MHz
~530	800 MHz
	ICNIRP International Guidelines (1998) http://www.icnirp.de/documents/emfgdl.pdf
1000	2400 MHz
950	1900 MHz
400	800 MHz
	These guidelines are based on biological effects of short-term, high-level exposures only, also referred to as thermal effects. Germany (1996), USA (1997), Japan (1997), Switzerland (2000), Australia (2002), Finland (2002), Sweden (2002), UK (2004), Austria (2006), etc.
	Belgium Guidelines (2001)
~200	1900 MHz
~100	800 MHz
	In 2009 a ruling of the constitutional court concluded that the setting of exposure levels for cell towers lies with the regional not the federal government. See further below. http://www.who.int/docstore/peh-emf/EMFStandards/who-0102/Europe/Belgium_files/table_be.htm
~10 (6 V/m)	China Ministry of Health Standard (1987) Exposure limit for “first grade environment” or sensitive areas http://www.who.int/docstore/peh-emf/EMFStandards/who-0102/Asia/China_files/table_ch.htm
~10 (6 V/m)	Toronto Board of Health, Canada (1999) Prudent Avoidance Policy for Siting of Cell Phone Base Stations: http://www.toronto.ca/health/hphe/pdf/rf_bon_update.pdf
~10 (6 V/m)	Russia Ministry of Health Standard SanPin 2.1.8. (2003) Exposure limit for general public http://www.tesla.ru/english/protection/standards.html
~10 (6 V/m)	Italy Decree (2003) Precautionary attention level not to be exceeded in sensitive areas http://www.who.int/docstore/peh-emf/EMFStandards/who-0102/Europe/Italy_files/table_datoteke/Italy_DPCM_RF_eng.pdf
	Switzerland Ordinance (NISV 2000) Precautionary cell tower exposure limit for sensitive areas http://www.bafu.admin.ch/elektrosmog/01100/01101/index.html?lang=de
~9.55	1800 MHz
~6.6	900 MHz and 1800 MHz combined on transmitter site
~4.25	900 MHz
~2.4 (3 V/m)	Ukraine Health & Safety Guideline (1996) http://zakon.rada.gov.ua/cgi-bin/laws/main.cgi?page=1&nreg=z0488-96

~2.4 (3 V/m)	Regional Ordinances in Brussels (2007), Wallonia (2009), Flanders (2010) http://www.who.int/peh-emf/project/mapnatreps/BELGIUM_EMF_report_2008_2009.pdf http://www.jokeschauvliege.be/upload/indepers/persbericht.pdf
~1 (2 V/m)	ECOLOG Institute in Germany (2000) - Precautionary recommendation based on review of scientific literature - Emissions from single RF sources (e.g. cell tower) at max. 30% of precautionary limit http://www.hese-project.org/hese-uk/en/papers/ecolog2000.pdf
0.1	Salzburg Resolution on Mobile Telecommunication Base Stations (2000) Precautionary recommendation by leading scientists http://www.salzburg.gv.at/salzburg_resolution_e.htm
0.1	BioInitiative Working Group (2007) Precautionary recommendation for outdoor environment http://www.bioinitiative.org/report/index.htm
0.017	Seletun Consensus Statement (2010) Precautionary recommendation http://iemfa.org/index.php/publications/seletun-resolution
0.01	Working Group of EU STOA Panel (2001) Precautionary recommendation http://www.europarl.europa.eu/stoa/publications/studies/20000703_en.pdf
0.01	BioInitiative Working Group (2007) Precautionary recommendation for indoor environment http://www.bioinitiative.org/report/index.htm
0.01	BUND (Friends of the Earth Germany) (2008) Precautionary recommendation for hazard protection http://www.bund.net/fileadmin/bundnet/publikationen/sonstiges/20081028_sonstiges_funktechnologien_position.pdf
0.001	Health Department of the Federal State of Salzburg (Austria 2002) Precautionary recommendation for outdoor environment (GSM sum total) http://www.salzburg.gv.at/konfliktmanagement_salzburger_modell.pdf
0.0001	Health Department of the Federal State of Salzburg (Austria 2002) Precautionary recommendation for indoor environment (GSM sum total) http://www.salzburg.gv.at/konfliktmanagement_salzburger_modell.pdf
0.0001	BUND (Friends of the Earth Germany) (2008) Precautionary recommendation for general protection http://www.bund.net/fileadmin/bundnet/publikationen/sonstiges/20081028_sonstiges_funktechnologien_position.pdf
<0.00001	Building Biology Evaluation Guidelines (SBM-2008) "No Concern" Specifically designed for sleeping areas associated with long-term risks http://www.baubiologie.de/downloads/english/richtwerte_2008_englisch.pdf
0.0000001	Minimum level required to maintain connection with cell phone handset
0.000000000001	Natural radiation

$$0.1 \text{ W/m}^2 = 100 \text{ mW/m}^2 = 100,000 \text{ }\mu\text{W/m}^2 = 10 \text{ }\mu\text{W/cm}^2$$