Cell Tower Studies

Health Effects are Not Explained by Cell Tower Concerns - Germany	Occup Environ Med 66:118- 123.	Mobile phone base stations and adverse health effects: phase 1 of a population-based, cross-sectional study in Germany. Blettner, M., Schlehofer, B, Breckenkamp, J., Kowall, B., Schmiedel, S. Reis, U., Potthoff, P., Schüz, J. & Berg-Beckhoff, G. (2009).	"In the initial phase, reported on in this paper, 30,047 persons from a total of 51,444 who took part in the nationwide survey also answered questions on how mobile phone base stations affected their health. A list of 38 health complaints was used. A multiple linear regression model was used to identify predictors of health complaints including proximity of residence to mobile phone base stations and risk perception. RESULTS: Of the 30,047 participants (response rate 58.6%), 18.7% of participants were concerned about adverse health effects of mobile phone base stations, while an additional 10.3% attributed their personal adverse health effects to the exposure from them. Participants who were concerned about or attributed adverse health effects to mobile phone base stations and those living in the vicinity of a mobile phone base station (500 m) reported slightly more health complaints than others. CONCLUSIONS: A substantial proportion of the German population is concerned about adverse health effects caused by exposure from mobile phone base stations. The observed slightly higher prevalence of health complaints near base stations can not however be fully explained by attributions or concerned about base stations still reported more health problems close to the base station than people living more far away.
Electrohyper sensitivity Symptoms Present for Both Concerned and Unconcerne d Residents - Poland	Med Pr. 2004; 55(4):345-51.	[Subjective symptoms reported by people living in the vicinity of cellular phone base stations: review]. [Article in Polish] Bortkiewicz A, et al.	http://www.ncbi.nlm.nih.gov/pubmed/15620045. "The results of the questionnaire survey reveal that people living in the vicinity of base stations report various complaints mostly of the circulatory system, but also of sleep disturbances, irritability, depression, blurred vision, concentration difficulties, nausea, lack of appetite, headache and vertigoThe performed studies showed the relationship between the incidence of individual symptoms, the level of exposure, and the distance between a residential area and a base station. This association was observed in both groups of persons, those who linked their complaints with the presence of the base station and those who did not notice such a relation."
Cancer Death Rate Increase Near Cell Towers - Brazil	Sci Total Environ. 2011 Jul 7. [Epub ahead of print]	Mortality by neoplasia and cellular telephone base stations in the Belo Horizonte municipality, Minas Gerais state, Brazil. Dode, A., Leao, M., Tejo, F., Gomes,	http://www.ncbi.nlm.nih.gov/pubmed/21741680 "A descriptive spatial analysis of the BSs and the cases of death by neoplasia identified in the municipality was performed through an ecological-epidemiological approach, using georeferencing Between 1996 and 2006, 7191 deaths by neoplasia occurred and within an area of 500m from the BS, the mortality rate was 34.76 per 10,000 inhabitants. Outside of this area, a decrease in the number of deaths by neoplasia occurred. The greatest accumulated

		A., Dode, D., Dode, M., Moreira, C., Condessa, V., Albinatti, C. & Caiaffa, W. (2011). Sci Total Environ. 2011 Sep 1;409(19):3649-65. doi: 10.1016/j.scitotenv .2011.05.051. Epub 2011 Jul 13.	incidence was 5.83 per 1000 in the Central-Southern region and the lowest incidence was 2.05 per 1000 in the Barreiro region. During the environmental monitoring, the largest accumulated electric field measured was 12.4V/m and the smallest was 0.4V/m. The largest density power was 40.78uW/cm(2), and the smallest was 0.04uW/cm(2) The mortality rates and the relative risk were higher for the residents inside a radius of 500 m from the BS, compared to the average mortality rate of the entire city, and a decreased dose-response gradient was observed for residents who lived farther away from the BS
Electrohyper sensitivity Symtoms - Germany	Umwelt Medizin Gesellschaft, Feb. 2010: 130-139.	("Specific Health Symptoms and Cell Phone Radiation in Selbitz (Bavaria, Germany)- Evidence of a Dose-Response Relationship") Eger, H. & Jahn, M. (2010).	http://www.umg-verlag.de/umwelt-medizin-gesellschaft/210_ej_z.pdf "The mean radiation measurements of the groups exposed at most in Selbitz (1.2 V/m) was substantially higher than the mean radiation of the study population studied in the QUEBEB study (1) of the German mobile telephone research program (Deutsches Mobilfunkforschungsprogramm DMF, established mean value DMF 0.07 V/m). A significant correlation was found dependent on dose-effects for insomnia, depressions, cerebral symptoms, joint illnesses, infections, skin changes, heart and circulation disorders, and disorders of the optical and acoustic sensory systems and the gastro-intestinal tract with objectively determined locations of exposure, which can be related by the influence of microwaves on the human nervous system."
Cancer Cases Significantly Higher - Germany	Umwelt Medizin Gesellschaft 17,4 2004, as: "Einfluss der räumlichen Nähe von Mobilfunksend eanlagen auf die Krebsinzidenz"	The Influence of Being Physically Near to a Cell Phone Transmission Mast on the Incidence of Cancer. Eger, H., Hagen, K., Lucas, B. Vogel, P. & Voit, H. (2004).	http://avaate.org/IMG/pdf/20041118_naila.pdf http://www.hese- project.org/de/emf/Studien/StudienDiskussion/NailaStudie/2 0050226_naila-studie.pdf "The result of the study shows that the proportion of newly developing cancer cases was significantly higher among those patients who had lived during the past ten years at a distance of up to 400 metres from the cellular transmitter site, which has been in operation since 1993, compared to those patients living further away, and that the patients fell ill on average 8 years earlier. In the years 1999-2004, ie after five years operation of the transmitting installation, the relative risk of getting cancer had trebled for the residents of the area in the proximity of the installation compared to the inhabitants of Naila outside the area."
Electrohyper sensitivity Symptoms - Poland	(Biuletyn PTZE, nr 14, Warszawa 2006, pp 23- 26)	Assessment of subjective complaints reported by people living near mobile phone base	http://www.emfresearch.com/epidemiological-research-on-cell-towers/ "The study subjects comprised 500 people from 5 regions of the city of Lodz, living in houses located at the distances of up to 50 m, 50-100m, 100-150m, 150-200m and over 200m

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		stations. Nofer Institute of Occupational Medicine, Lodz, Poland. Workshop PTZE Electromagnetics technics in preventive health, Lodz, Poland 13-15 December 2006 Gadzicka, E., Bortkiewicz, A., Zmyslony, M., Szymczak, W. & Szyjkowska, A. (2006).	from the base station. The distance from base station is the estimated value of exposure to EMF. There were 181 (36.2%) men aged 46.2 - 29.0 years and 319 (63.8%) women aged 50.1 - 17.0 years A significant relationship was found to occur between the frequency of some symptoms and the distance from the base station. Everyday headaches were most frequent in respondents living at the distance 100 - 150 m from the base station in comparison with subjects living in farther distances. Differences were statistically significant $(p=0,013)$. Symptoms of depression were most frequently reported by people living at the distance 50 - 100 m $(23,3\%)$ and over 200 m $(21,3\%)$. Differences were at the borderline of statistical significance $(p=0.059)$. It seems important to note that only 1.8% of subjects reported their concern about possible harmful effects of the base stations."
Microwave Sickness Significantly Correlated - Spain	Electromagnet ic Biology and Medicine, 22: 161-169.	The microwave Syndrome: A preliminary Study in Spain. Navarro, E., Segure, J., Portelés, M., Gomez Perretta, C. (2003)	http://www.tandfonline.com/doi/abs/10.1081/JBC-120024625 "A health survey was carried out in Murcia, Spain, in the vicinity of a Cellular Phone Base Station working in DCS-1800 MHz. This survey contained health items related to "microwave sickness" or "RF syndrome." The microwave power density was measured at the respondents' homes. Statistical analysis showed significant correlation between the declared severity of the symptoms and the measured power density. The separation of respondents into two different exposure groups also showed an increase of the declared severity in the group with the higher exposure."
Electrohyper sensitivity Symptoms Significantly Correlated - France	Electromagnet ic Biology and Medicine, 22: 41-49	Survey Study of People Living in the Vicinity of Cellular Phone Base Stations. Santini, R., Santini, P., Le Ruz, P., Danze, J. & Seigne, M. (2003).	http://www.emrpolicy.org/science/research/docs/santini_eb m_2003.pdf "A survey study was conducted, using a questionnaire, on 530 people (270 men, 260 women) living or not in proximity to cellular phone base stations. Eighteen different symptoms (Non Specific Health Symptoms-NSHS), described as radiofrequency sickness, were studied by means of the chisquare test with Yates correction. The results that were obtained underline that certain complaints are experienced only in the immediate vicinity of base stations (up to 10 m for nausea, loss of appetite, visual disturbances), and others at greater distances from base stations (up to 100 m for irritability, depressive tendencies, lowering of libido, and up to 200 m for headaches, sleep disturbances, feeling of discomfort). In the 200 m to 300 m zone, only the complaint of fatigue is experienced significantly more often when compared with subjects residing at more than 300 m or not exposed (reference group). For seven of the studied symptoms and for the distance up to 300 m, the frequency of

			reported complaints is significantly higher ($P < 0.05$) for women in comparison with men. Significant differences are also observed in relation to the ages of subjects, and for the location of subjects in relation to the antennas and other electromagnetic factors."
Electrohyper sensitivity Symtoms Near Base Stations - Iran	Electromagnet ic Biology and Medicine,	Health effects of living near mobile phone base transceiver station (BTS) antennae: a report from Isfahan, Iran. Shahbazi-Gahrouei, D., Karbalae, M., Moradi, H. & Baradaran-Ghahfarokhi, M. (2013). Electromagn Biol Med. 2014 Sep;33(3):206-10. doi: 10.3109/15368378.20 13.801352. Epub 2013 Jun 19.	http://www.ncbi.nlm.nih.gov/pubmed/23781985 "Results - The results showed that most of the symptoms such as nausea, headache, dizziness, irritability, discomfort, nervousness, depression, sleep disturbance, memory loss and lowering of libido were statistically significant in the inhabitants living near the BTS antenna less than 300 m distances) compared to those living far from the BTS antenna (more than 300 m). Conclusion - It is suggested that cellular phone BTS antenna should not be sited closer than 300 m to populations to minimize exposure of neighbors."
Study Recommend s Decrease Standards to 0.0001 µW/cm² In Salzburg	Presented at an International Conference in Kos, Greece May 2004	The Microwave Syndrome: Further Aspects of a Spanish Study. Oberfeld, G., Navarro, A., Enrigue, Portoles, M., Maestu, Ceferino, Gomez- Perretta, C. (2004).	http://www.apdr.info/electrocontaminacion/Documentos/Investigacion/ESTUDOS%20EPIDEMIOLOXIDOS%20E%20ANTENAS/The%20Microwave%20Syndrome%20-%20Further%20Aspects%20of%20a%20Spanish%20Study.pdf"Based on the data of this study the advice would be to strive for levels not higher than 0.02 V/m for the sum total, which is equal to a power density of 0.0001 µW/cm² or 1 µW/m², which is the indoor exposure value for GSM base stations proposed on empirical evidence by the Public Health Office of the Government of Salzburg in 2002."
Brain Cancer in Young Military Radar Workers	Arch Environ Health. 2002 Jul- Aug;57(4):270- 2.	Brain cancer with induction periods of less than 10 years in young military radar workers. Richter ED, Berman T, Levy O.	https://www.ncbi.nlm.nih.gov/pubmed/12530592 The authors have reported on 5 young patients who had brain tumors that appeared within 10 yr of initial occupational exposures to radar. Four of the patients were less than 30 yr of age when the diagnoses were initially made. Brief induction periods that follow high exposures in individual sentinel patients are a recognized indicator of impending group risk, and these periods call attention to the need for precautionary measures. Similarly, reports of short induction periods for brain cancer on the side of the head in which there has been prior use of cell phones may also indicate increased risk.