ACTION DES CHAMPS ELECTROMAGNETIQUES SUR LA SANTE

«Ce ne sont pas les informations qui nous font défaut,
ce qui nous manque, c'est le courage de comprendre
ce que nous savons déjà et d'en tirer les conséquences»
Sven LINDQVIST

Les recherches scientifiques

2016

Sources et références bibliographiques

(Quelques exemples parmi la publication de milliers d'études)

1. Les effets biologiques des champs électromagnétiques de la téléphonie mobile

1.1 Atteintes du système nerveux central

1.1.1 Effets des micro-ondes sur l'électroencéphalogramme (EEG) et altération de l'activité cérébrale

Krause C.M., Bjornberg C.H., Personen M., Hulten a., Liesivuori T, Koivisto M., Revonsuo A., Laine M., Hamalainen H.
Mobile phone effects on children's event-related oscillatory EEG during an auditory memory task
Int.J.Radiat.Biol. **2006** Jun. ; 82 (6) : 443-450.
Cognitive Science Unit, Department of Psychology, University of Helsinki, Helsinki, Finland.

Marino A.A. et al.
Non linear changes in brain electrical activity due to cell phone radiation.
Bioelectromagnetics. **2003**. 24: 339-346.

Huber R. et al.
Exposure to pulsed high-frequency electromagnetic field during waking affects human sleep EEG.
J. Sleep Res. **2002**. 11: 289-295.

Sidorenko AV et al.
The effects of microwaves on the bioelectric brain activity.
Radiat. Biol. Radioecol. **2002.** 42: 546-550

Krause C.M., Rause C.M., Sillanmaki L , Koivisto M., Haggqvist A., Saarela C., Revonsuo A., Laine M., Hamalainen H.
Effects of electromagnetic fields emitted by cellular phones on the EEG during a memory task.
Neuroreport. **2000** Mar. 20 ; 11 (4) : 761-764.
Centre for Cognitive Neuroscience and Department of Psychology, University of Turku, Finland.

Freude G. et al.
Microwaves emitted by cellular telephones affect Human slow brain potentials.
Eur. J. Appl. Physiol. **2000**. 11: 1641-1643 (10)

Von Klitzing L.,
Low Frequency pulsed Electromagetic Fields Influences EEG of man.
Phys. Med. **1995**. 11: 77-80

Eulitz C. et al
Mobile phones modulate reponse patterns of human brain activity.
Neuroreport. **1998.** 9: 3229-3232

1.1.2 Effets des CEM sur l'activité cérébrale en fonction du temps d'exposition

Lee T.M. et al.
The effect of the duration of exposure to the electromagnetic field emitted by mobile phones on human attention.
Neuroreport. **2003**. 14: 1361-1364

Croft A. et al.
Acute mobile phone operation affects neural function in humans:
Clinical Neurophysiology. **2002**. 113: 1623-1632

1.1.3 Maux de tête

Hillert L., Akerstedt T., Lowden A., Wiholm C., Kuster N., Eberth S., Boutry C., Moffat S.D., Berg M., Arnetz B.B.
The effects of 884 MHz GSM wireless communication signals on headache and other symptoms: an experimental provocation study.
Bioelectromagnetics **2008** Apr. ; 29 (3) : 185-196.
Department of Public Health Sciences, Division of Occupational Medicine, Karolinska Institutet, Stockholm, Sweden.

1.1.4 Flux sanguin cérébral

Alto S., Haarala C., Bruck A., Sipila H., Hamalainen H., Rinne J.O.
Mobile phone affects cerebral blood flow in humans.
J.Cereb.Blood Flow Metab. **2006** Jul. 26 (7) : 885-890
Turku PET Centre, University of Turku, Turku, Finland.

Haarala C, Aalto S, Hautzel H, Julkunen L, Rinne JO, Laine M, Krause B, Hamalainen H.
Effects of a 900 MHz mobile phone on cerebral blood flow in humans: a PET study.

Neuroreport. **2003** Nov 14; 14(16):2019-23.

1.1.5 Blocage de l'action de la mélatonine et altération du sommeil

Koylu H., Mollaoglu H., Ozguner F., Nazyroglu M., Delibab N.
Melatonin modulates 900 MHz microwave-induced lipid peroxidation changes in rat brain
Toxicol.Ind.Health **2006** Jun. ; 22 (5) : 211-216.
Department of physiology, Faculty of Medicine, Suleyman Demirel University,32260, Isparta, Turkey.

Al-Khlaiwi T, Meo SA. **(2004).**
Association of mobile phone radiation with fatigue, headache, dizziness, tension and sleep disturbance in Saudi population
Saudi Medical Journal. Jun; 25(6):732-6.

Huber R., Schuderer J., Grad T., Jutz K., Borbelly A.A., Kuster N. , Achermann P.
Radiofrequency electromagnetic field exposure in humans : Estimation of SAR distribution in the brain, effects on sleep and heart rate
Bioelectromagnetics **2003** May; 24 (4): 262-276.*Institute of Pharmacology and Toxicology, University of Zürich, Zürich,* Switzerland.

Santini R. et al.
«Enquête sur la santé de riverains de stations relais de téléphonie mobile: II/ Incidences de l'âge des sujets, de la durée de leur exposition et de leur position par rapport aux antennes et autres sources électromagnétiques».
Pathol. Biol. **2003**. 51: 412-415.

Van Dongen H.P. et al.
The cumulative cost of additional wakefulness: dose-response effects on neurobehavioral functions and sleep deprivation: a brief conceptual review
Sleep. **2003**. 26: 117-126

Lebedeva N.N. et al.
Investigation of brain potentials in sleeping humans exposed to the electromagnetic field of mobile phones
Critic Rev. Biomed. Eng. **2001**. 29: 125-133.

Wagner P. et al.
Human sleep EEG under the influence of pulsed radio frequency electromagnetic fields. Results from polysomnographies using submaximal high power flux densities
J. Neurophpsychobiology. **2000**. 42: 207-212

Holsboer-Traschler E. et al.
Sleep in depression and sleep deprivation a brief conceptual review.

J. Biol. Psychiatry. **2000.** 1: 180-186.

Borberly A.A. et al.
Pulsed high frequency electromagnetic field affects sleep and sleep electroencephalogram . Neuroscience Letters. **1999**. 275: 207-210.
Institute of University and Toxicology, University of Zurich, Switzerland

Mann K. et al.
Effects of pulsed high-frequency electromagnetic fields on human sleep
Journal Neuropsychobiology. **1996.** 33: 41-47

1.1.6 Effets des micro-ondes sur l'hypothalamus

Huber R. et al.
Radiofrequency electromagnetic field exposure in human : Estimation of SAR distribution in the brain, effects on sleep and heart rate.
Bioelectromagnetics. **2003.** 24: 262-276

1.1.7 Perméabilité de la barrière hématoencéphalique

Tang J., Zhang Y., Yang L., Chen Q., Tan L., Zuo S., Feng H., Chen Z., Zhu G.
Exposure to 900 Mhz electromagnetic fields activates the mkp-1/ERK pathway and causes blood-brain barrier damage and cognitive impairment in rats
Brain Res. **2015** Mar 19 ; 1601 : 92-101
Department of Neurosurgery, Southwest Hospital, Third Military Medical University,Chongqing, 400038, China.

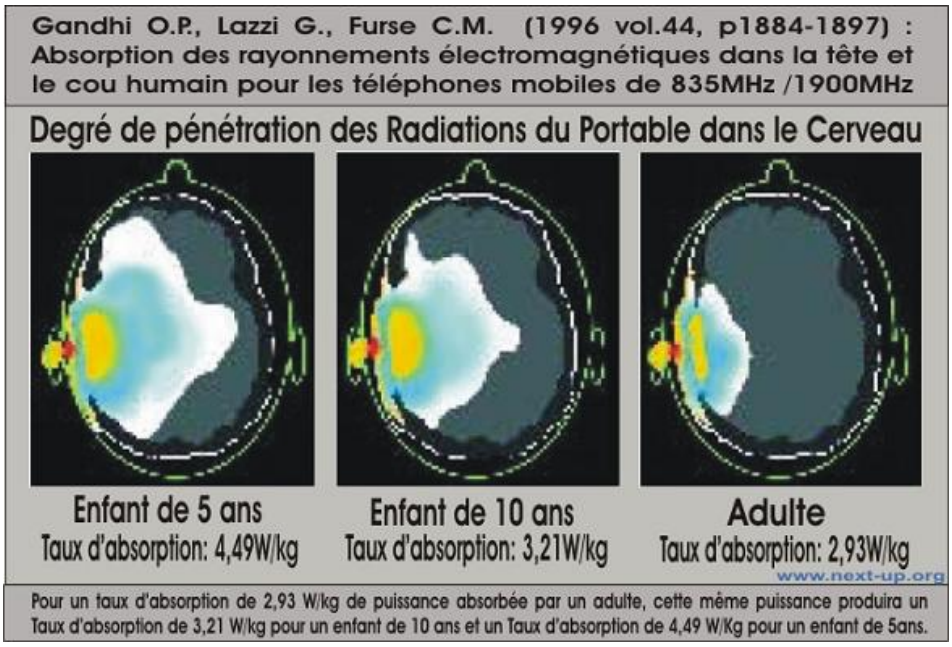
Soderqvist F., Carlberg M., Hardell L.
Mobile and cordless telephones, serum transthyretin and the blood-cerebrospinal fluid barrier : a cross-sectionnal study.
Environ.Health **2009** Apr 21 ; 8 : 19.
Department of Oncology, University Hospital, Orebro, Sweden

Eberhardt J.L., Persson B.R., Brun A.E., Salford L.G., Malmgren L.O.
Blood-brain barrier permeability and nerve cell damage in rat brain 14 and 28 days after exposure to microwaves from GSM mobile phones.
Electromagn.Biol.Med. **2008** ; 27 (3) : 215-229.
Department of Medical Radiation Physics, Lund University Hospital, Lund, Sweden.
Aubineau P. (**2006**)

1.1.8 Conséquences du degré de pénétration des radiations du portable dans le cerveau de l'enfant

Morgan Ll et al.
Why children absorb more microwave radiation than adults : the consequences
J Microscopy and Ultrastructure **2014** ; 2(4):197

Gandhi O.P., Lazzi G., Furse C.M.
Electromagnetic absorption in the human head and neck for mobile téléphones at 835 MHz and 1900 MHz IEEE».
Transactions on Microwave Theory and Techniques, **1996**, 44: 1884-1897.



1.1.9 Atteinte des neurones de l'hippocampe et altération de la mémoire

Odaci E. 1 , Bas O., Kaplan S.
Effects of prenatal exposure to a 900 Mhz electromagnetic field on the dentate gyrus of rats : a stereological and histopathological study.
Brain Res**.** **2008** Oct 31 ; 1268 : 224-229.
Department of Histology and Embryology, Karadeniz Technical University School of Medicine, Trabzon, Turkey.

Ning W., Xu S.J., Chiang H., Xu Z.P., Zhou S.Y., Yang W., Luo J.H.,
Effects of GSM 1800 MHz on dentritic development of cultured hippocampal neurons.
Acta Pharmacol.Sin. **2007** Dec. ; 28 (12) : 1873-1880.
Department of Neurobiology, Zhejiang University School of Medicine, Hangzhou 310058, China.

Eliyahu I., Luria R., Hareuveny R., Margaliot M., Meiran N., Shani G.

Effects of radiofrequency radiation emitted by cellular telephones on the cognitive functions of humans.
Bioelectromagnetics **2006** Feb; 27 (2) : 119-126.
Radiation Safety Division Soreq NRC, Yavne, Israël

Xu S., Ning W., Xu Z., Zhou S., Chiang H., Luo J.
Chronic exposure to GSM 1800-MHz microwaves reduces excitatory synaptic activity in cultured hippocampal neurons
Neurosci.Lett. **2006** May 8 ; 398 (3) : 253-257.
.*Department of Neurobiology, Zhejiang University School of Medicine, Hangzhou 310031, China*

Preece A.W., Goodfellow S., Wright M.G , Butler S.R., Dunn E.J., Johnson Y., Mankelow T.C., Wesnes K.
Effect of 900 MHz mobile phone transmission on cognitive function in children.
Bioelectromagnetics **2005** ; Suppl. 7 : S 138-143.
Department of Medical Physics, Bristol Oncology Centre, Bristol, United Kingdom.

1.1.10 Epilepsie

Lopez-Martin E., Relova-Quinteiro J.L., Gallego-Gomez R., Peleteiro-Fernandez M., Jorge-Barreiro F.J., Arespena F.J.
GSM radiation triggers seizures and increases cerebral c-Fos positivity in rats pretreated with subconvulsive doses of picrotoxin.
Neurosci.Letter **2006** May 1 ; 398 (1-2) : 139-144.
Morphological Sciences Department, University of Santiago de Compostela, 15782 Santiago Compostela, Spain.

1.1.11 Maladies dégénératives

Pluta R.
Is the ischemic blood-brain barrier insufficiency responsible for fullblown Alzheimer's disease ?
Neurol.Res. **2006** Sep. ; 28 (6) : 665-671.
Department of Neurodegenerative Disorders, Medical Research Centre, Polish Academy of Sciences, Warsaw, Poland.

1.1.12 Autisme et troubles comportementaux

Rezk A.Y., Abdulqawi K., Mustafa R.M., Abo El-Azm T.M., Al-Inany H.
Fetal and neonatal responses following maternal exposure to mobile phones
Saudi Med.J. **2008** Feb. ; 29 (2) : 218-223.
Department of Obstetrics and Gynecology, Benha Faculty of Medicine, Zagazig University, Cairo, Egypt.

Thornton I.M.
Out of time : a possible link between mirror neurons, autism and electromagnetic radiation.
Med.Hypotheses **2006** ; 67 (2) : 378-382.
Psychology Department University of Wales Swansea, Singleton Park, Swansea SAZ 8PP, Wales, UK

Kane R.C.
A possible association between fetal/neonatal exposure to radiofrequency electromagnetic radiation and the increased incidence of autism spectrum disorders (ASD).
Med.Hypotheses **2004** ; 62 (2) : 195-197.
The Associated Bioelectromagnetics Technologists, PO Box 133, Blanchardville, WI 53516-0133, USA.

1.2 Modification des mécanismes cellulaires et stress oxydatif

1.2.1 Altération du transport du sodium du potassium et fuite du calcium des membranes cellulaires

Bortkiewicz A.
A study on the biological effects of exposure mobile-phone frequency EMF. [Article in Polish]
Med.Pr. **2001** ; 52 (2) : 101-106.
Zakladu Fizjologii Pracy i Ergonomii, Instytutu Medycyny Pracy, Lodzi.

1.2.2 Altération du métabolisme du calcium: effets sur les canaux calciques et augmentation du calcium intracellulaire

Pall Ml.
Microwave electromagnetic fields act by activating voltage-gated calcium channels: why the current international safety standards do not predict biological hazard.
Recent Res Devel Mol Cell Biol. **2014**;7.

Rao VS et al,
Non thermal effects of radiofrequency-field exposure on calcium dynamics in stem cell-derived neuronal cells : elucidation of calcium pathways.

Radiat Res. **2008**;169(3):319-29.

Paulraj R., Behari J., Rao A.R.
Effect of amplitude modulated RF radiation on calcium ion efflux and ODC activity in chronically exposed rat brain
Indian J.Biochem.Biophys. **1999** Oct. ; 36 (5) : 337-340.
School of Environmental Sciences, Jawaharlal Nehru University, New Delhi.

1.2.3 Formation d'espèces d'oxygène actif (ROS : reactive oxygen species)

Usselman Rj et al.
Spin biochemistry modulates reactive oxygen species (ROS) production by radio frequency magnetic fields.
PLoS ONE. **2014** ; 9(3)

Kesari K. K. 1, Behari J.
Evidence for mobile phone radiation exposure effects on reproductive pattern of male rats : role of ROS.
Electromagn.Biol.Med **2012** Sep ; 31 (3) : 213-222. Doi: 10.3109/15368378.2012.700292.1
Bioelectromagnetic Laboratory, School of Environmental Sciences, Jawaharlal Nehru
University, New Delhi, India.

Campisi A et al.
Reactive oxygen species levels and DNA fragmentation on astrocytes in primary culture after acute exposure to low intensity microwave electromagnetic field.
Neurosci Lett. **2010** ; 473(1):52-5.

1.2.4 Activation en cascade de la protéine kinase

Kesari K.K. 1, Meena R., Nirala J., Kumar J., Verma H.N.
« Effect of 3G cell phone exposure with computer controlled 2-D stepper motor on non-thermal activation of the hsp27/p38MAPK stress pathway in rat brain. »
Cell.Biochem.Biophys. **2014** Mar ; 68 (2) : 347—358.
School of Life Sciences, Jaipur National University, Jaipur, 302017, Rajasthan, India

1.2.5 Augmentation de l'oxyde nitrique (NO)

Pilla AA.
Electromagnetic fields instantaneously modulate nitric oxide signaling in challenged biological systems.
Biochem Biophys Res Commun. **2012** ; 426(3):330-33

Pilla A.A et al

Electromagnetic fields as first messenger in biological signaling :application to calmodulin-dependent signaling in tissue repair.
Biochim Biophys Acta. **2011**; 1810 (12):1236-45.

1.2.6 Diminution du superoxyde dismutase (SOD)

Burlaka A et al
Overproduction of free radical species in embryonal cells exposed to low intensity radiofrequency radiation.
Exp Oncol . **2013** ;35(3):219-25

Xu S. et al
Exposure to 1800 MHz radiofrequency radiation induces oxidative damage to mitochondrial DNA in primary cultured neurons.
Brain Res. **2010**; 1311:189-96

1.2.7 Protéines de choc (HSP 70 : Heat Protein Shock)

Blank M, Goodman R.
Electromagnetic fields stress living cells.
Pathophysiology. **2009** ; 16(2-3):71-78.

Markovà E et al.
Microwaves from GSM mobile telephones affect 53BP1 and gamma-H2AX foci in human lymphocytes from hypersensitive and healthy persons.
Environ Health Perspect **2005** ; 113(9): 1172–77.

Wirth D. et al.
Les protéines de choc thermique Hsp70 : biomarqueur et acteur du stress cellulaire. (Article de synthèse).
Ann. Med. Vét. **2003**, 147, 127-144

Schlesinger M.J. et al.
Heat-Shock from bacteria to men
Cold Spring Harbor Laboratory : New York, **1982**, 286p

1.2.8 Enzymes, neuromédiateurs et ATP

Barteri M., Pala A., Rotella S.
Structural and kinetic effects of mobile phone microwaves on acetylcholinesterase activity
Biophys.Chem. **2005** Mar. 1 ; 113 (3) : 245-253.
Dipartimento di Chimica-Universita degli Studi di Roma « La Sapienza » Piazzale Aldo Moro 5, 00185 Roma, Italy.

Gandhi VC, Ross DH.
Alterations in alpha-adrenergic and muscarinic cholinergic receptor binding in rat brain following non-ionizing radiation.
Radiation Res. **(1987)** Jan; 109(1):90-9.

1.2.9 Stress oxydatif

Igor Yakymenko, Olexandr Tsybulin, Evgeniy Sidorik, Diane Henshel, Olga Kyrylenko & Sergiy Kyrylenko (**2015**):
Oxidative mechanisms of biological activity of low-intensity radiofrequency radiation, Electromagnetic Biology and Medicine,
DOI:10.3109/15368378.2015.1043557

Kesari KK et al.
Cell phone radiation exposure on brain and associated biological systems.
Indian J Exp Biol.**2013** ;51(3):187-200

Yurekli A.I., Ozkan M., Kalkan T., Saybasili H., Tuncel H., Atukeren P., Gumustas K., Seker S.
GSM base station electromagnetic radiation and oxidative stress in rats.
Electromagn.Biol.Med. **2006** ; 25 (3) : 177-188. *Tubitak-Uekae, EMC TEMPEST Test Center, Gebze-Kocaeli, Turkey.*

Stopczyk D., Gnitecki W., Buczynski A., Markuszewski L., Buczynski J.,
Effect of electromagnetic field produced by mobile phones on the activity of superoxide dismutase (SOD-1) and the level of malonyldialdehyde (MDA) – in vitro study. [Article in Polish]
Med.Pr. **2002** ; 53 (4) : 311-314. *Zakladu Medycyny Zapobiegawczej i Promocji Zdrowia, Wojskowej Akademii Medycznej w Lodzi.*

Kalns J., Ryan KL, Mason, PA, Bruno JG, Gooden R, Kiel JL. **(2000**)
Oxidative stress precedes circulatory failure induced by 35-GHz microwave heating.
Shock. vol. 13, no1, pp. 52-59 (37 ref.).

1.3 Altération du système immunitaire

Lushnikov K.V., Gapeev A.B., Sadovnikov V.B., Cheremis N.K.
Effect of extremely high frequency electromagnetic radiation of low intensity on parameters of humoral immunity in healthy mice. [Article in Russian]
Biofizika **2001** Jul-Aug. ; 46 (4) : 753-760. *Institute of Cell Biophysics, Russian Academy of Sciences, Pushchino, Moscow Region, 142290 Russia.*

Bergier L, Lisiewicz J, Moszczynski P, Rucinska M, Sasiadek U.
Effect of electromagnetic radiation on T-lymphocyte subpopulations and immunoglobulin level in human blood serum after occupational exposure.

Med Pr.;41(4):211-5.(**1990**). [Article in Polish]

Smialowicz RJ, Rogers RR, Garner RJ, Riddle MM, Luebke RW, Rowe DG.
Microwaves (2,450 MHz) suppress murine natural killer cellactivity.
Bioelectromagnetics. (**1983**).4(4):371-81.

1.4 Cancérogénèse

1.4.1 Mécanismes cellulaires induisant une cancérogénèse

Kim YW et al,
Oxidative stress in angiogenesis and vascular disease.
Blood. **2014** ; 123(5):625-31.

Harrison IP, Selemidis S.
Understanding the biology of reactive oxygen species and their link to cancer: NADPH oxidases as novel pharmacological targets.
Clin Exp Pharmacol Physiol. **2014** ; 41(8):533-42.

Akhavan -Sigari R et al.
Connection between cell phone use, p53 gene expression in different zones of glioblastoma multiform and survival prognoses.
Rare tumors. **2014**; 6:5350-54

Desai N.R. et al.
Pathophysiology of cell phone radiation: oxidative stress and carcinogenesis with focus on male reproductive system.
Reprod Biol Endocrinol. **2009** ; 7:114-23

Marinelli F. et al.
Exposure to 900 MHz electromagnetic field induces an unbalance between pro-apoptotic and pro-survival signals in T-lymphoblastoid leukemia CCRF--CEM cells.
J Cell Physiol. **2004** ; 198(2):324-32.

Balcer-Kubiczek E.K., Harrison G.M.
Neoplastic transformation of C3H/10T1/2 cells following exposure to 120-Hz modulated 2.45-GHz microwaves and phorbol ester tumor promoter.
Radiat.Res. **1991** Apr.. ; 126 (1): 65-72.
University of Maryland School of Medicine, Department of Radiation Oncology, Baltimore 21201.

1.4.2 Tumeurs bénignes du cerveau dont neurinome acoustique

Pettersson et al.

Long-term mobile phone use and acoustic neuroma risk
Epidemiology. **2014** Mar;25(2):233-4121

Hardell L. et al.
Pooled analysis of case-control studies on acoustic neuroma diagnosed 1997-2003 and 2007-2009 and use of mobile and cordless phones.
Int J Oncol**. 2013**;43:1036-1044. Epub 2013 Jul 22.

Moon et al.
Association between vestibular schwannomas and mobile phone use
Tumour Biol. 2014 Jan; 35(1): 581–587. Published online **2013** Aug 27.

Sato et al.
A case-case study of mobile phone use and acoustic neuroma risk in Japan.
Bioelectromagnetics. **2011** Feb;32(2):85-93. doi: 10.1002/bem.20616. Epub 2010 Oct 28.

Hardell L., Carlberg M., Hansson Mild K**.**
Case-control study on cellular and cordless telephones and the risk for acoustic neuroma or meningioma in patients diagnosed 2000-2003.
Neuroepidemiology **2005** ; 25 (3) : 120-128. Epub 2005 Jun 13.
Department of Oncology, University Hospital, Orebro University, Sweden.

Kundi M., Mild K., Hardell l., Mattsson M.O.,
Mobile telephones and cancer-a review of epidemiological evidence.
J.Toxicol.Environ.Health B.Crit.Rev. **2004** Sep-Oct. ; 7 (5) : 351-384.
Institute of Environmental Health, Department for Occupational and Social Hygiene, Medical Faculty, University of Vienna Kinderspitalgasse 15 A-1095 Vienna Austria.

1.4.3 Tumeurs malignes du cerveau

Morgan LL, Miller AB, Sasco A, Davis DL**.**
Mobile phone radiation causes brain tumors and should be classified as a probable human carcinogen (2A)(Review).
Int J Oncol. **2015** May;46 (5):1865-71.

Hardell J. Carlberg, M.
Increasing Rates of Brain Tumours in the Swedish National In patient Register and the Causes of Death Register.
Int. J. Environ. Res. Public Health **2015**, *12*, 3793-3813

De Vocht F, Hannam K, Buchan I.
Environmental risk factors for cancers of the brain and nervous system: the use of ecological data to generate hypotheses.
Occup Environ Med. **2013** May;70(5):349-56

Hardell L, Carlberg M.

Using the Hill viewpoints from 1965 for evaluating strengths of evidence of the risk for brain tumors associated with use of mobile and cordless phones.
Rev Environ Health. **2013**; 28(2-3):97-106.

Zada G. et al
Incidence trends in the anatomic location of primary malignant brain tumors in the United States : 1992–2006.
World Neurosurg **2012** ;77(3–4):518–24

Dobes M, Khurana VG, Shadbolt B, Jain S, Smith SF, Smee R, Dexter M, Cook R.
Increasing incidence of glioblastoma multiforme and meningioma, and decreasing incidence of Schwannoma (2000-2008) : Findings of a multicenter Australian study.
Surg Neurol Int**. 2011**;2:176

Tillmann et al
Indication of carcinogenic potential of chronicUMTS-modulated radiofrequency exposure in an ethylnitrodourea mouse model,
J. Radiat. Biol. **2010** ; 86:529-41.

Barlow et al
The completeness of the Swedish Cancer Register : a sample survey for year 1998
Acta Oncologica, **2009**; 48: 27-33

Hardell L., Mild K.H., Carlberg M., Hallquist A.
Cellular and cordless telephone use and the association with brain tumors in different age groups.
Arch.Environ.Health **2004** Mar ; 59 (3) : 132-137.
Department of Oncology, University Hospital, Orebro, Sweden

Litovitz T.A., Krause D., Penafiel M., Elson E.C., Mullins J.M.,
The role of coherence time in the effect of microwaves on ornithine decarboxylase activity.
Bioelectromagnetics **1993** ; 14 (5) : 395-403.
Vitreous State Laboratory, Catholic University of America, Washington, DC 20064 , USA.

Morgan LL, Miller AB, Sasco A, Davis DL.
Mobile phone radiation causes brain tumors and should be classified as a probable human carcinogen (2A)
Int J Oncol. **2015** May;46(5):1865-71

Hardell L, Carlberg M.
Using the Hill viewpoints from 1965 for evaluating strengths of evidence of the risk for brain tumors associated with use of mobile and cordless phones.
Rev Environ Health. **2013**;28(2-3):97-106

1.4.4 Lymphomes

Lerchl A, Klose M, Grote K, Wilhelm AF, Spathmann O, Fiedler T, Streckert J, Hansen V, Clemens M..
Tumor promotion by exposure to radiofrequency electromagnetic fields below exposure limits for humans.
Biochem Biophys Res Commun. **2015** Mar 6.

Linet M.S., Taggart T., Severson R.K., Cerhan J.R., Cozen W., Hartge P., Colt J.,
Cellular telephones and non-Hodgkin lymphoma.
Int.J.Cancer. **2006** Nov. 15 ; 119 (10) : 2382-2388.
Division of Cancer Epidemiology and Genetics, National Cancer Institute, Bethesda, MA.

1.4.5 Tumeurs malignes de l'œil (mélanome uvéal)

Stang A., Anastassiou G., Ahrens W., Bromen K., Bornfeld N., Jockel K.H.
The possible role of radiofrequency radiation in the development of uveal melanoma.
Epidemiology **2001** Jan. : 12 (1) : 7-12.
Institute for Medical Informatics, Biometry and Epidemiology, Medical Faculty, University of Essen, Germany.

1.4.6 Atteintes de la moelle osseuse

Busljeta I., Trosic I., Milkovic-Kraus S.
Erythropoietic changes in rats after 2.45 GHz non thermal irradiation.
Int.J.Hyg.Environ.Health **2004** Dec.; 207 (6) : 549-554.
Vuk Vrhovac University Clinic, Zagreb, Croatia.

1.4.7 Cancer du sein

West JG et al
Multifocal breast cancer in young women with prolonged contact between their breasts and their cellular phones
Hindawi Publishing Corporation, Case Reports in Medicine. **2013** ; Article ID 354682

1.4.8 Tumeur de la glande parotide

Sadetzki S., Chetrit A., Jarus-Hakak A., Cardis E., Deutch Y., Duvdevani S., Zultan A., Novikov I., Freedman L., Wolf M.

Cellular phone use and risk of benign and malignant parotid gland tumors – a nationwide case-control study.
Am.J.Epidemiol. **2008** Feb. 15 ; 167 (4) : 457-467.
Cancer and Radiation Epidemiology Unit, Gertner Institute, Chaim Sheba Medical Center, Tel Hashomer, Israël.

1.5 Système cardiovasculaire

1.5.1 Troubles du rythme cardiaque (voir altération du sommeil)

Barker A.T., Jackson P.R., Parry H., Coulton L.A., Cook G.G., Wood S.M.
The effect of GSM and TETRA mobile handset signals on blood pressure, catechol levels and heart rate variability.
Bioelectromagnetics **2007** Sep. ; 28 (6) : 433-438.
Department of Medical Physics and Clinical Engineering, Sheffield Teaching Hospitals, NHS Foundation Trust, Royal Hallamshire Hospital, Sheffield, United Kingdom.

Huber R., Schuderer J., Graf T., Jutz K., Borbely A.A., Kuster N., Achermann P.
Radiofrequency electromagnetic field exposure in humans : Estimation of SAR distribution in the brain, effects on sleep and heart rate.
Bioelectromagnetics **2003** May; 24 (4) : 262-276.
Institute of Pharmacology and Toxicology, University of Zürich, Zürich, Switzerland

1.5.2 Mortalité cardiovasculaire

Savitz D.A. et al.,
Exposition professionnelle aux champs électromagnétiques et mortalité cardiovasculaire
Department of Epidemiology, School of Public Health, University of North Carolina Chapel Hill USA **(1999)**

1.6 Système endocrinien

Mann K. et al.,
Effects of pulsed high-frequency electromagnetic fields on the neuroendocrine system .
Neuroendocrinology. 1**998.** 67 : 139-144

1.7 Génotoxicité

1.7.1 Atteinte de l'ADN

Gorpinchenko L et al,
The influence of direct mobile phone radiation on sperm quality.
Cent European J Urol. **2014** ; 67(1):65-71

Atli Sekeroglu Z. 1, Akar A., Sekeroglu V.
Evaluation of the cytogenotoxic damage in immature and mature rats exposed to GSM 900 Mhz radio-frequency electromagnetic fields.
Int.J.Radiat.Biol. **2013** Nov ; 89 (11) : 985-992. 2013.1 Department of Biology, Faculty of Sciences and Letters, Ordu University, 52200 Ordu, Turkey

Deshmuk Ps et al
Detection of low level microwave radiation induced deoxyribonucleic acid damage vis-à-vis
Genotoxicity in Brain of Fischer Rats.
Toxicol Int. **2013** ; 20(1):19-24

Sekeroglu V. 1, Akar A., Sekeroglu Z.A.
Cytotoxic and genotoxic effects of high-frequency electromagnetic fields (GSM 1800 Mhz) on immature and mature rats.
Ecotoxicol.Environ.Saf. **2012** Jun ; 80 : 140-144.
Department of Biology, Faculty of Sciences and Letters, Ordu University, 52200 Ordu, Turkey.

Panagopoulos Dj et al
Bioeffects of mobile telephony radiation in relation to its intensity or distance from the antenna.
Int J.Radiat Biol.**2010** ; 86(5):345-57

Diem E., Schwarz C., Adlkofer F., Jahn O., Rudiger H.
Non-thermal DNA breakage by mobile-phone radiation (1800 MHz) in human fibroblasts and in transformed GFSH-R17 rat granulosa cells in vitro.
Mutat.Res. **2005** Jun. 6 ; 583 (2) : 178-183.
Division of Occupational Medicine, Medical University of Vienna, Waehringer Guertel 18-20, Vienna 1090, Austria

Gapeev A.B., Lushnikov K.V., Shumilina Iu.V., Sirota N.P., Sadovnikov V.B., Chemeris N.K.
Effects of low-intensity extremely high frequency electromagnetic radiation on chromatin structure of lymphoid cells in vivo and in vitro. [Article in Russian]
Radiats Biol.Radioecol. **2003** Jan-Feb. ; 43 (1) : 87-92.
Institute of Cell Biophysics, Russian Academy of Sciences, Pushchino, Moscow Region, 142290 Russia.

Sagripanti J.L., Swicord M.L., Davis C.C.
Microwave effects on plasmid DNA.

Radiat.Res. **1987** May ; 110 (2) : 219-231.

1.7.2 Altération de l'expression des gènes

Zeng Q.L., Weng Y., Chen G.D., Lu D.Q., Chiang H., Xu Z.P.
Effects of GSM 1800 MHz radiofrequency electromagnetic fields on protein expression profile of human breast cancer cell MCF-7.[Article in Chinese]
Zhonghua Yu Fang Yi Xue Za Zhi. **2006** May ; 40 (3) : 153-158.
Bioelectromagnetics Laboratory, Zhejiang University School of Medicine, Hangzhou 310031, China.

Miyakoshi J., Takemasa K., Takashima Y., Ding G.R., Hirose H., Koyama S.
Effects of exposure to a 1950 MHz radio frequency field on expression of Hsp70 and Hsp27 in human glioma cells.
Bioelectromagnetics **2005** May ; 26 (4) : 251-257.
Department of Radiological Technology, School of Health Sciences, Faculty of Medicine, Hirosaki University, Hirosaki, Japan.

1.8 Baisse de la fertilité

Falzone N., Huyser C., Fourie F., Toivo T., Leszczynski D., Franken D.
In vitro effect of pulsed 900 MHz GSM radiation on mitochondrial membrane potential and motility of human spermatozoa.
Bioelectromagnetics **2008** May ; 29 (4) : 268-276.
Department of Biomedical Sciences, Tshwane University of Technology, Pretoria, Gauteng, South Africa.

Wdowiak A., Wdowiak L., Wiktor H.
Evaluation of the effect of using mobile phones on male fertility.
Ann.Agric.Environ.Med. **2007** ; 14 (1) 169-172.
Department of Obstetrics, Gynaecology and Obstetric-Gynaecological Nursing, Medical University of Lublin, 20-950 Lublin,Jaczewskiego 5, Poland.

1.9 Altération du développement embryonnaire

Divan H.A., Kheifets L., Obel C., Olsen J.
Prenatal and postnatal exposure to cell phone use and behavioral problems in children.
Epidemiology **2008** Jul ; 19 (4) : 523-529.
Department of Epidemiology, UCLA School of Public Health, University of California, Los Angeles, CA 90095-1772, USA.

Rezk A.Y., Abdulqawi K., Mustafa R.M., Abo El-Azm T.M., Al-Inany H.
Fetal and neonatal responses following maternal exposure to mobile phones.
Saudi Med.J. **2008** Feb ; 29 (2) : 218-223.

Department of Obstetrics and Gynecology, Benha Faculty of Medicine, Zagazig University, Cairo, Egypt

C, Channakeshava1. (**2004**).
Biological effects of power frequency magnetic fields : neurochemical and toxicological changes in developing chick embryos.
Biomagnetic Research and Technology. 2

1.10 Effets des champs électromagnétiques sur la croissance de l'enfant

Divan H.A., Kheifets L., Obel C., Olsen J.
Cell phone use and behavioural problems in young children.
J.Epidemiol.Community Health **2012** Jun ; 66 (6) : 524-529.
Division of Biostatistics, Department of Preventive Medicine, Keck School of Medicine of
the University of Southern California, Los Angeles, CA, USA.

1.11 Effets des champs électromagnétiques sur la croissance de l'adolescent

Keshvari J., Keshvari R., Lang S.
The effect of increase in dielectric values on specific absorption rate (SAR) in eye and head tissues following 900, 1800, and 2450 Mhz radio frequency (RF) exposure.
Phys.Med.Biol. **2006** Mar 21 ; 51 (6) : 1463-1477.
Technology Platforms, Nokia Corporation, PO Box 301, FIN-00045 Nokia Group,Linnoitustie 6, 02600 Espoo, Finland.

Grigorev IU.G.
The electromagnetic fields of cellular phones and the health of children and of teenagers (the situation requiring to take an urgent measure). [Article in Russian]
Radiats Biol.Radioecol. **2005** Jul-Aug ; 45 (4) : 442-450 URSS

1.12 Vieillissement prématuré

Adang D.
An Epidemiological Study on Low-level 21-month Microwave Exposure of Rats.
[« Une étude épidémiologique sur l'Exposition de Rats à des Micro-ondes de faible intensité durant 21 mois. »] Thèse présentée en vue de l'obtention du grade de docteur en sciences appliquées. Juin **2008**

Jury : Prof. L. Vandendorpe (président), Prof. A. Vander Vorst (promoteur), Prof. R. Remacle (promoteur), Prof I. Huynen, ProF.G. Eggermont, Prof. H. Tuncel.
Université Catholique de Louvain, Laboratoire d''Hyperfréquences, Laboratoire de Biologie animale, Louvain-la-Neuve, Belgique

1.13 Dépression et fatigue chronique

Pall, M.L.,
Microwave frequency electromagnetic fields (EMFs) produce widespread neuropsychiatric effects including depression,
Journal of Chemical Neuroanatomy **(2015**)

Pall ML.
Chronic Fatigue Syndrome as a NO/ONOO- Cycle Disease.
College of Science, School of Molecular Biology, Washington State University. USA

1.14 L'électrohypersensibilité

Belpomme D., Campagnac C., Irigaray P.
Reliable disease biomarkers characterizing and identifying electrohypersensitivity and multiple
chemical sensitivity as two etiopathogenic aspects of a unique pathological disorder
Rev Environ Health **2015**; 30(4): 251–271

Carpenter DO.
Excessive exposure to radiofrequency electromagnetic fields may cause the development of electrohypersensitivity.
Altern Ther Health Med **2014**;20(6):40–2.

Hagström M, Auranen J, Ekman R.
Electromagnetic hypersensitive Finns: symptoms, perceived sources and treatments, a questionnaire study.
Pathophysiology **2013**;20(2):117–22.

Baliatsas C, Van Kamp I, Lebret E, Rubin GJ.
Idiopathic environmental intolerance attributed to electromagnetic fields (IEI-EMF): a systematic review of identifying criteria.
BMC Public Health **2012**;12:643.

Mccarty D.E., Carrubba S., Chesson A.L., Frilot C., Gonzalez-Toledo E., Marino A.A.,
Electromagnetic hypersensitivity : evidence for a novel neurological syndrome.

Int.J.Neurosci. **2011** Dec ; 121 (12) : 670-676.
Department of Neurology, LSU Health Sciences Center, Shreveport Louisiana 71130- 3932, USA.

Levallois P.
Hypersensitivity of human subjects to environmental electric and magnetic field exposure : a review of the litterature.
Environ.Health Perspect. **2002** Aug ; 110 (Suppl 4) : 613-618.
Unité de Recherche en Santé Publique, Centre Hospitalier Universitaire de Québec, et Institut National de Santé Publique du Québec, Beauport, Canada

Bergqvist U, Vogel E, Editors.
Possible health implications of subjective symptoms and electromagnetic fields.
A report prepared by a European group of experts for the European Commission,
DGV. Arbete och Hälsa, **1997**:19. Swedish National Institute for Working Life, Stockholm, Sweden.

Rea WJ, Pan Y, Fenyves EJ, Sujisawa I, Suyama H, et al.
Electromagnetic field sensitivity.
J Bioelectricity **1991**;10(1–2):241–56.

1.15 Altération du système osseux : minéralisation asymétrique

Saraví, Fernando D. MD, Ph D
Asymmetries in Hip Mineralization in Mobile Cellular Phone Users
Journal of Craniofacial Surgery:**2011** Volume 22 - Issue 2 - pp 706-710

1.16 Dermatologie

Kimata H.
Enhancement of allergic skin wheal responses in patients with atopic eczema/dermatitis syndrome by playing video games or by a frequently ringing mobile phone.
Eur J Clin Invest. **(2003).** Jun: 33(6):513-7.

Santini R, Santini P, Danze JM, Le Ruz P, Seigne M.
Investigation on the health of people living near mobile telephone relay stations: I/Incidence according to distance and sex.
Pathol Biol (Paris). [Article in French] (**2002**). Jul; 50(6):369-73.

Johansson O, Liu P-Y. (**1995**)
Electrosensitivity','electrosupersensitivity and 'screen dermatitis': preliminary observations from on-going studies in the human skin.

In: Proceedings of the *COST 244: Biomedical Effects of Electromagnetic Fields - Workshop on Electromagnetic Hypersensitivity* (ed. D Simunic), EU/EC (DG XIII), Brussels/Graz,; 52 57

2. Les effets perturbateurs du courant électrique : extremely low frequencies fields (ELF)

2.1 Leucémie chez l'enfant

Schuz J.
Exposure to extremely low-frequency magnetic fields and the risk of childhood cancer : update of the epidemiological evidence.
Prog.Biophys.Mol.Biol. **2011** Dec ; 107 (3) : 339-342. Epub 2011 Sep 19.
InternationalAgency for Research on Cancer (IARC), Section of Environment and Radiation, Lyon, France

Magnani C.
Risk of childhood leukemia and environmental exposure to ELF electromagnetic fields. [Article in Italian]
G.Ital.Med.Lav.Ergon. **2003** Jul-Sep ; 25 (3) : 373-375.
Dipartimento di Scienze Mediche dell'Universita del Piemonte Orientale, Servizio di Epidemiologia dei Tumori del Centro di Referimento per l'Epidemiologia e la Prevenzione Oncologica, CPO, Piemonte. Italy

Li W.H. et al.
Regulation of cell viability and prostéaglandin E2 secretion by specific 7,5 Hz electromagnetic field stimulations on osteoblasts.
BEMS Meeting **2002**. Québec, Canada. Pagez 103-105

Wartenberg W.
Residential EMF exposure and childhood leukaemia-meta analysis and population attributable risk.
Bioelectromagnetics. **2001**.S5-S84-S104

Ahlbon A et al.
A pooled analysis of magnetic fields and childhood leukemia..
Brith. J. of Cancer. **2000**. 83 : 692-698

2.2 Troubles cardio-vasculaires

Hakansson N., Gustavsson P., Sastre A., Floderus B.,
Occupational exposure to extremely low frequency magnetic fields and mortality from cardiovascular disease.
Am.J.Epidemiol. **2003** Sep 15 ; 158 (6) : 534-542.
Institute of Environmental Medicine, Karolinska Institutet, Stockholm,

Sweden

2.3 Cancers

Zhao G., Lin X., Zhou M., Zhao J.**,**
Relationship between exposure to extremely low-frequency electromagnetic fields and breast cancer risk : a meta-analysis.
Eur.J.Gynaecol.Onco. **2014** ; 35 (3) : 264-269.Roosli M., Lortscher M., Egger M., Pfluger D.,

Schreier N., Lortscher E., Locher P., Spoerri A, Minder C.**,**
Leukaemia, brain tumours and exposure to extremely low frequency magnetic fields : cohort study of Swiss railway employees.
Occup.Environ.Med**. 2007** Aug ; 64 (8) : 553-559. Epub 2007 May 24.
Department of Social and Preventive Medicinae, University of Berne, Switzerland.

Klaeboe L., Blaasaas K.G., Haldorsen T., Tynes T.,
Residential and occupational exposure to 50-Hz magnetic fields and brain tumours in Norway : a population-based study.
Int.J.Cancer **2005** May 20 ; 115 (1) 137-141.
The Cancer Registry of Norway, Institute of Population-Based Cancer Research, Oslo,
Norway.

2.4 Neurodégénérescence

Roosli M., Lortscher M., Egger M., Pfluger D., Schreier N., Lortscher E., Locher P., Spoerri A., Minder C.
Mortality from neurodegenerative disease and exposure to extremely low frequency magnetic fields : 31 years of observations on swiss railway employees.
Neuroepidemiology **2007** ; 28 (4) : 197-206.
Department of Social and Preventive Medicinae, University of Berne, Berne, Switzerland.

Cook C.M., Thomas A.W., Prato F.S.,
Human electrophysiological and cognitive effects of exposure to ELF magnetic and ELF modulated RF and microwave fields : a review of recent studies.
Bioelectromagnetics **2002** Feb ; 23 (2) : 144-157.
Lawson Health Research Institute, Department of Nuclear Medicine MR, St Joseph's
Health Care, London, Ontario, Canada.

2.5 Sclérose latérale amyotrophique (SLA)

Zhou H., Chen G., Chen C., Yu Y., Xu Z.,
Association between extremely low-frequency electromagnetic fields occupations and amyotrophic lateral sclerosis : a meta-analysis.
PloS One **2012** ; 7 (11) e48364
Bioelectromagnetics Laboratory, School of Public Health, Zhejiang University School of
Medicine, Hangzhou, China

Li C.Y., Sung F.C.,
Association between occupational exposure to power frequency electromagnetic fields and amyotrophic lateral sclerosis : a review.
Am.J.Ind.Med**.** **2003** Feb ; 43 (2) : 212-220.
Department of Public Health, College of Medicine, Fu-Jen Catholic University, Hhsinchuang, Taipei Hsien, Taiwan Republic of China.

2.6 Maladie d'Alzheimer

Davanipour Z., Sobel E.
Long-term exposure to magnetic fields and the risks of Alzheimer's disease and breast cancer : further biological research.
Pathophysiology **2009** Aug ; 16 (2-3) : 149-156. Epub 2009 Mar 10.
Northwestern University, Feinberg School of Medicine, Chicago,II, United States

Qiu C., Fratiglioni L., Karp A., Winblad B., Bellander D.
Occupational exposure to electromagnetic fields and risk of Alzheimer's disease.
Epidemiology **2004** Nov ; 15 (6) : 687-694.
Aging Research Center, Division of Geriatric, Epidemiology and Medicine, Department of Neurotec., Karolinska Institutet, S-113 82 Stockholm, Sweden

Garcia A.M., Sisternas A., Hoyos S.P.
Occupational exposure to extremely low-frequency electric and magnetic fields and Alzheimer's disease : a meta-analysis.
Int.J.Epidemiol. **2008** Apr ; 37 (2) : 329-340. Epub 2008 Fe'b 1.
Department of Preventive Medicine and Public Health, University of Valencia, Spain.

2.7 Dépression

Verkasalo P.K., Kaprio J., Varjonen J., Romanov K., Heikkila K., Koskenvuo M.,
Magnetic fields of transmission lines and depression.

Am.J.Epidemiol.**1997** Dec 15 ; 146 (12) : 1037-1045.
Department of Public Health, University of Helsinki, Finland

2.8 Altération de la mémoire

Preece A.W., Wesnes K.A., Iwi J.R.
The effect of a 50 Hz magnetic field on cognitive function in humans.
Int.J.Radiat.Biol. **1998** Oct ; 74 (4) : 463-470.
Department of Medical Physics and Bioengineering, Bristol Oncology Centre, UK

2.9 Immunité

De Jager G.J. Et al.,
Effects of a 50 Hz magnetic field on the immune status of the mouse, musculus : long and short term exposure.
BEMS Meeting **2002**. Québec, Canada. Pages 103-105

2.10 Effets neurovégétatifs et hématologiques

Bonhomme-Fabre l et al.,
Effets neurovégétatifs et hématologiques des champs électromagnétiques de basses fréquences (50 Hz) produits par les transformateurs.
Service de pharmacie, Hôpital Paul Brousse, Villejuif (**1998)**

2.11 Action sur les magnétosomes

Kirschvink J.L., Kobayashi-Kirschvink A., Diaz-Ricci J.C., Kirschvink S.J.
Magnetite in human tissues : a mechanism for the biological effects of weak ELF magnetic fields.
Bioelectromagnetics **1992** ; Suppl 1 : 101-113.
Division of Geological and Planetary Sciences, California Institute of Technology, Pasadena 91125.

2.12 Perturbation du sommeil

Liu H, Chen G, Pan Y, Chen Z. Jin W,. Sun C. Chen C. Dong X. Chen K. Xu Z. Zhang S. Yu Y**.**
Occupational electromagnetic fields exposures associated with sleep quality : a cross-sectional study.
PloS One **2014** Oct 23 ; 9 (10) : e110825. Doi: 10.137

1/journal.pone.011825. Ecollection 2014.Department of Epidemiology & Health Statistics, School of Public Health, School of Medicine, Zhejiang University, Hangzhou, Zhejiang, China ;Chronic Disease Research Institute, School of Public Health, School of Medicine, Zhejiang University, Hangzhou, Zhejiang, China
2 Bioelectromagnetics Laboratory, School of Medicine, Zhejiang University, Hangzhou,
Zhejiang, China.
3 Yiwu Center for Disease Control and Prevention, Yiwu, Zhejiang, China.
4 Department of Epidemiology & Health Statistics, School of Public Health, School of
Medicine, Zhejiang University, Hangzhou, Zhejiang, China.

2.13 Suicide

Van Wijngaarden E., Savitz D.A., Kleckner R.C., Cai J., Loomis D.
Exposure to electromagnetic fields and suicide among electric utility workers : a nested case-control study.
WestJ.Med. **2000** Aug ; 173 (2) : 94-100.
Department of Epidemiology, University of North Carolina, School of Public Health CB 7400, Chapel Hill, NC 27599-7400, USA.

3. Les effets perturbateurs des émetteurs de champs électromagnétiques de hautes fréquences

3.1 Antennes relais de téléphonie mobile

Buchner K., Horst E.
Changes of clinically important Neurotransmitters under the influence of modulated RF fields - a long term study under real life conditions.
Umwelt Medizin Geselschaft **2011** 24(1); 44-57

Dode A.C., Leao M.M., Tejo Fde A., Gomes A.C., Dode D.C., Dode M.C., Moreira C.W., Condessa V.A.,Albinatti C., Caiaffa W.T.
Mortality by neoplasia and cellular telephone base stations in the Belo Horizonte municipality, Minas Gerais state, Brazil.
Sci.total Environ. **2011** Sep 1 ; 409 (19) : 3649-3665.
Minas Methodist University Center Izabela Hendrix, Belo Horizonte City, Minas Gerais state, Brazil.

Khurana V.G., Hardell L., Everaert J., Bortkiewicz A., Carlberg M., Ahonen M.

Epidemiological evidence for a health risk from mobile phone base stations.
Int.J.Occup.Environ.Health **2010** Jul-Sep ; 16 (3) : 263-267.
Department of Neurosurgery, The Canberra Hospital, The Australian National University
Medical School, Garran, Australia.

Abdel-Rassoul G., El-Fateh O.A., Salem M.A., Michael A., Farahat F., El-Batanouny M., Salem E. Neurobehavioral effects among inhabitants around mobile phone base stations.
Neurotoxicology **2007** Mar ; 28 (2) : 434-440. .
Community, Environmental and Occupational Medicine Department, Faculty of
Medicine, Menoufiya, Shebin El-Kom, Egypt.

Hutter H.P., Moshammer H., Wallner P., Kundi M.
« Subjective symptoms, sleeping problems, and cognitive performance in subjects living near mobile phone base stations. »
Occup.Environ.Med. **2006** May ; 63 (5) : 307-313.
Institute of Environmental Health, Medical University of Vienna, Vienna, Austria.

Wolf R., Wolf D.
« Increased incidence of cancer near a cell-phone transmitter station. »
Int.J.Cancer Prev. **2004** Apr ; 1 (2) : 1-18.
The Dermatology Unit Kaplan Medical Center, Rechovot, and the Sackler Faculty of
Medicine, Tel-Aviv, Israël. The Pediatric Outpatient Clinic, Hasharon Region, Kupat
Holim, Israël.

3.2 DECT (téléphone fixe sans fil)

Soderqvist F., Carlberg M., Hansson Mild K., Hardell L.
« Exposure to a 890-MHz mobile phone-like signal and serum levels of S100B and transthyretin in volunteers. »
Toxicol.Lett. **2009** Aug 25 ; 189 (1) : 63-66. Epub 2009 May 7.
Department of Oncology, University Hospital School of Health and Medical Sciences,
Orebro University, Orebro SE-701 87, Sweden

3.3 WiFi

Markov M. Grigoriev Y.G.
Wi-Fi technology – an uncontrolled global experiment on the health of mankind.
Electromagn.Biol.Med. **2013** Jun ; 32 (2) : 200-208. doi: 10.3109/15368978.2013.776430.
Resarch International, Williamsville, NY, USA.

Linda Saili, Amel Hanini, Chiraz Smirani, Ines Azzouz, Amina Azzouz, Mohsen Sakly, Hafedh Abdelmelek, Zihad Bouslama
Effects of acute exposure to WIFI signals (2.45GHz) on heart variability and blood pressure in Albinos rabbit
Environmental Toxicology and Pharmacology, Volume 40, Issue 2, Pages 600-605

3.4 Compteurs intelligents

Lamech F.
Self-reporting of symptom development from exposure to radiofrequency fields of wireless smart meters in victoria, australia : a case series.
Alter.Ther.Health Med. **2014** Nov-Dec ; 20 (6) : 28-39.

Jamieson I.A.
SmartMeters-Smarter Practices. Solving emerging problems. A review.
2011 Report commissioned by EM radiation Research Trust UK Reg.Charity N° 1106304.pages 1-256. www.radiationresearch.org

Milham S., Morgan L.L.
A new electromagnetic exposure metric : high frequency voltage transients associated with increased cancer incidence in teachers in California school.
Am.J.Ind.Med**.** **2008** Aug ; 51 (8) : 579-586.
Washington State Department of Health, Tumwater, Washington, USA

3.5 Emetteurs radio et leucémies

Michelozzi P., Kirchmayer U., Capon A., Forastiere F., Biggeri A., Barca A., Ancona C., Fusco D., Sperati A., Papini P., Pierangelini A., Rondelli R., Prucci C.A.
Leukemia mortality and incidence of infantile leukemia near the Vatican Radio Station of Rome. [Article in Italian]
Epidemiol.Prev. **2001** Nov-Dec ; 25 (6) : 249-255.
Dipartimento di Epidemiologia ASL RME, Roma.

3.6 Emetteurs TV et leucémies

Merzenich H., Schmiedel S., Bennack S., Bruggemeyer H., Philipp J., Blettner M., Schuz J.
Childhood leukemia in relation to radio frequency electromagnetic fields in the vicinity of TV and radio broadcast transmitters.
Am.J.Epidemiol. **2008** Nov 15 ; 168 (10) : 1169-1178.
Institute of Medical Biostatistics, Epidemiology and Informatics, University Mainz, 55101 Mainz, Germany.

Hocking B., Gordon I.
Decreased survival for childhood leukemia in proximity to television towers.
Arch.Environ.Health **2003** Sep ; 58 (9) : 560-564.
Statistical Consulting Centre, University of Melbourne, Victoria, Australia.

3.7 Radars militaires

Yakymenko I., Sidorik E., Kyrulenko S., Chekhun V.
Long-term exposure to microwave radiation provokes cancer growth : evidences from radars and mobile communication systems.
Exp.Oncol. **2011** Jun ; 33 (2) : 62-70.
R.E. Kavetsky Institute of Experimental Pathology, Oncology and Radiobiology of NAS of Ukraine, Vasylkivska str. 45, Kyiv 03022, Ukraine

Degrave E., Meeusen B., Grivegnee A.R., Boniol M., Autier P.
Causes of death among Belgian professional military radar operators : a 37-year retrospective cohort study.
Int.J.Cancer **2009** Feb 15 ; 124 (4) : 945-951.
Unit of Epidemiology and Biostatistics, Military Hospital Brussels, Brussels, Belgium

Vignal et al
Effets des ondes hyperfréquences des téléphones mobiles et des radars sur l'œil,
(Centre de recherche du service des armées) - Elsevier Masson, Pathologie Biologie 57 **(2009**) 503-508

Richter E.R., Berman T., Levy O.
Brain cancer with induction periods of less than 10 years in young military radar workers. Arch.Environ.Health **2002** Jul-Aug ; 57 (4) : 270-272.
Unit of Occupational and Environmental Medicine, Hebrew University-Hadassah, Jerusalem, Israel.

John R. Goldsmith
Epidemiologic Evidence Relevant to Radar (Microwave) Effects Environmental Health Perspectives v.105, Supplement 6, 1dec **1997**
Department of Epidemiology and Health Services Evaluation, Ben-Gurion University of the Negev Beer Sheva, Israel