

# EHS studies in Japan

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2010. 9. 7

# List of EHS studies in Japan

- (1) Study of Kitazato University  
(including of provocation study:2007)
- (2) Study of citizen's group(Kumamoto:2008)
- (3) Report of Kato.Y et.al(Kawanisi :2009)
- (4) Report of Dr.Shinjo<sup>PDF</sup>(Okinawa:2010)
- (5) Study of Kato.Y(2010)
- (6) Study of Furubayashi et. al  
(provocation study:2009)

# Study of Kitazato University

## The first formal report of EHS in Japan

(From Home page in Ministry of Health, Labour and Welfare:2007)

平成 17 年度厚生労働科学研究費補助金（健康科学総合研究事業）  
「微量化学物質によるシックハウス症候群の病態解明、診断治療対策に関する研究」  
分担研究報告書

### 電磁波過敏症（Electromagnetic Hypersensitivity EHS）が 初発症状と考えられた 7 症例

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#### 研究要旨

電磁波が生体に及ぼす影響は北欧諸国で詳しい研究がなされている。最近では WHO サポートによる国際会議なども開催され、その議事録なども手に入れることができる。わが国ではこの問題には、多くの医師が無関心を装い興味があっても、公の場で症例を提示して議論する機会は殆ど皆無の状態である。今回、我々は初診時に電磁波過敏によると考えられ、精神科関係には専門医の協力で問題のない症例を集めることが出来た。電磁波過敏症がいかなる症例かを理解するために、ここに 7 例の症例を紹介した。また、電磁波問題で、海外で行われている研究で臨床家が知っておいてもよい研究を簡単に review する形で紹介した。主に患者の他覚的データを中心に紹介した。

7 cases regarded as the first appearance of EHS disease example .  
 Amalgamation with MCS, Autonomic ataxia, Disturbance in ocular motility, Disorder of the sense of equilibrium, Sight sensitive trouble, Pupillary reaction, EMF radiation load examination.

# 結果

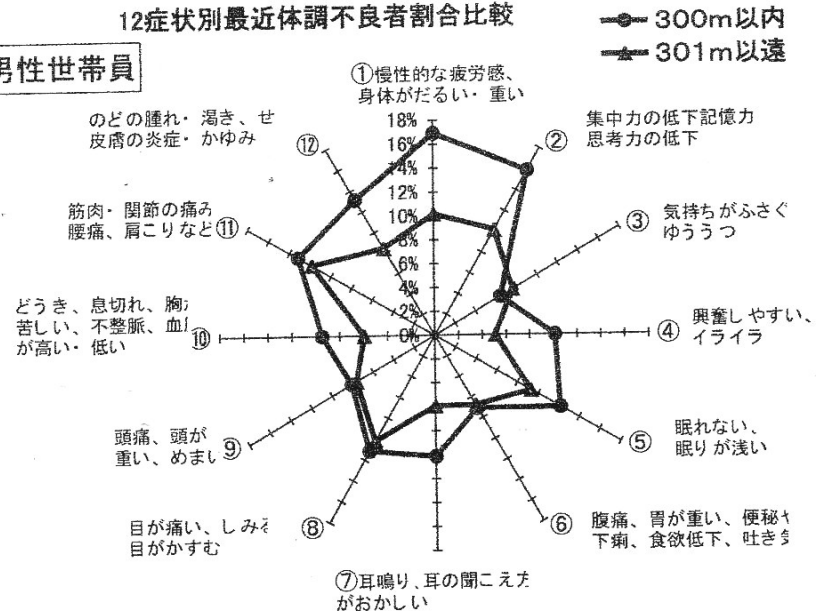
7 症例の検査所見を表にまとめると、次のようになる。

## 検査所見

症例	化学物質過敏症との合併	一般自律神経失調症	眼球運動障害	平衡機能障害	視覚感度障害	瞳孔反応	電磁波負荷試験
1	あり、しかし EHS 先行	あり	軽度障害	なし	なし	副交感神経緊張型	-----
2	なし	あり	なし	なし	なし	交感神経緊張型	-----
3	あり、しかし EHS 先行	なし	なし	なし	なし	なし	陽性
4	なし	なし	軽度障害	軽度障害	なし	なし	陰性
5	なし	なし	なし	なし	なし	なし	陰性
6	なし	なし	なし	なし	なし	副交感神経緊張型	陰性
7	なし	なし	なし	なし	なし	副交感神経緊張型	陽性

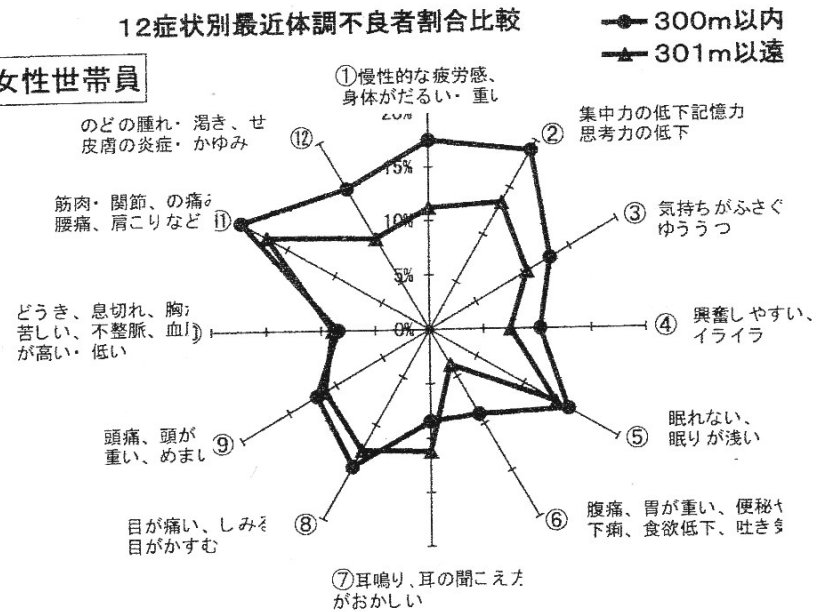
12症状別最近体調不良者割合比較

男性世帯員



12症状別最近体調不良者割合比較

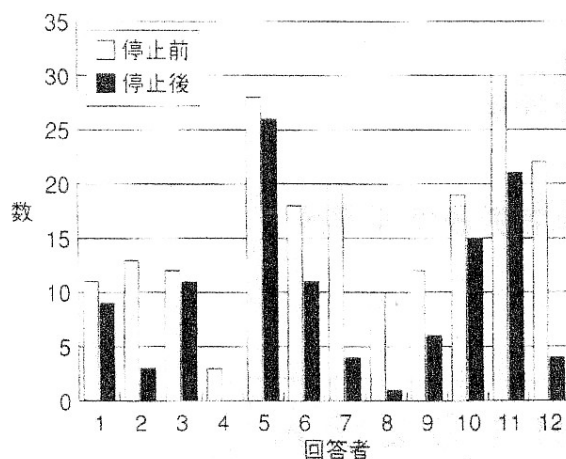
女性世帯員



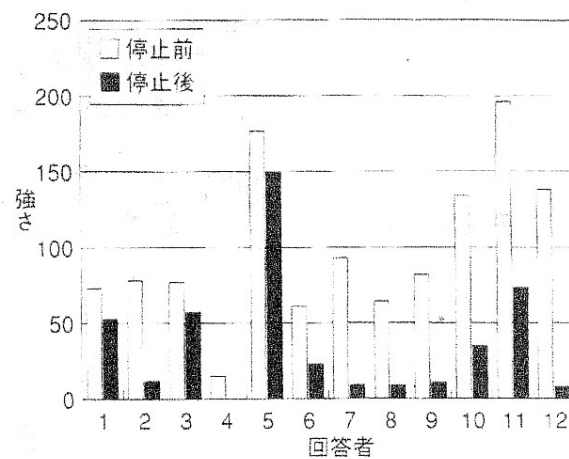
In the case of MAWANISHI city (reported by Kato.Y:2008)

Parameters of bad symptoms were decreased, after RF from the mobile phone base station had stopped.:

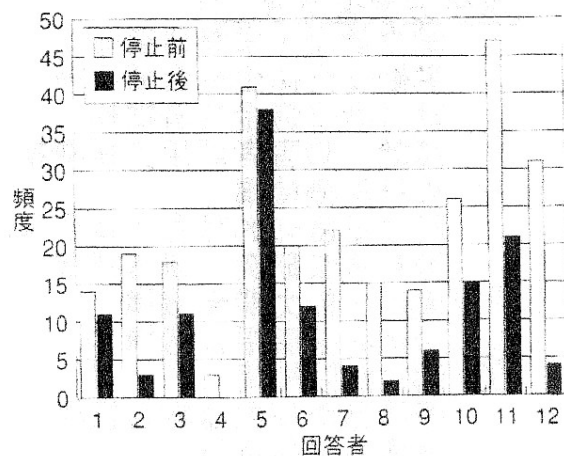
number of symptoms, Strength of symptoms, frequency of symptoms



▲図1：症状の数の変化



▲図2：症状の強さ



▲図3：症状の頻度の変化

▼表1：停止前と後の電場の変化

EMR-21使用(100kHz~3GHz)

測定場所	停止前 単位 (V/m)	停止後
1F	0.39(±0.24)→0.25(±0.14)	
2F	0.54(±0.26)→0.39(±0.16)	



Dr. Shinjo (Okinawa)

1/3

**Remission of Health Hazards among the Residents after the Removal of the Mobile Phone Base Station on the Roof of a Condominium.**

**The 800MHz mobile phone base station and antennas were mounted on top of a condominium building in 2000 followed by the addition of two-Giga-Hz (2GHz) antennas in March 2008.**

**Soon after the operation of the 2GHz antenna system, many residents of the building started suffering from health hazards. But none of the residents realized what was happening.**

<sup>2</sup>/<sub>3</sub>

**A family living on the top floor just below the antennas was forced to move out due to severe life-threatening symptoms in all family members. After moving to another place, all of the family members' symptoms improved/disappeared in less than two weeks. So, the husband and wife of the family who are a medical doctor and nurse decided to investigate the health problems among the residents.**

**Surprisingly, the hearing investigation revealed that a number of the residents were already suffering from health damages that might/could have been caused by 800MHz antennas system operation before 2GHz antennas.**

**Furthermore, some residents had been damaged by microwaves from 800MHz and 2GHz systems.**



The number of the residents whose health were compromised by microwaves from the mobile phone base station increased day after day. After the meeting with all of the residents, the condominium association decided to cancel the contract with the mobile phone company and requested to remove the antenna and base station immediately.

Fortunately, on Aug. 2009, all of the antennas and mobile phone base station were removed. Three months after the removal of the antennas, the symptoms of residents were investigated again.

The number of symptoms were 170 in all while the 800MHz and 2GHz antennas were operating, but it decreased to 22 three months after the removal of the antennas.

# Study of Kato.Y (2010)

## Electromagnetic Hypersensitivity Survey in Japan

**The Actual State of Health Injury by Electro Magnetic Field**  
-Symptom, Matter of Medical Treatment and Social/Economical Problems-

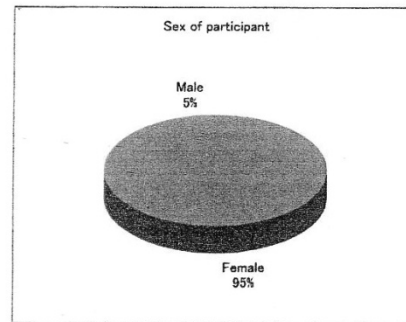
Yasuko Kato  
VOC-EMF Measures Research Association  
(<http://homepage3.nifty.com/vocemf/>)  
e-mail : [voc-emf@mbn.nifty.com](mailto:voc-emf@mbn.nifty.com)

# The questionnaire research to parson who diagnosed as EHS. 71(female) and 4(male)

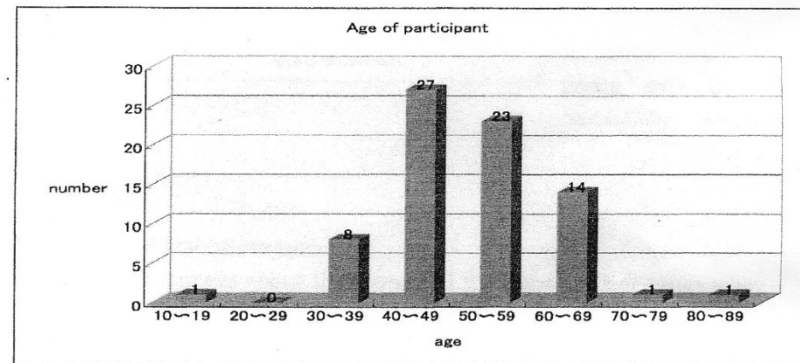
## 1) Composition of participant and Consultation situation

We carried out a questionnaire research to the person who diagnosed as EHS, consider own, to be EHS, and think own to be sensitive to Electro Magnetic Field (EMF), from June to October 2009. The questionnaire was distributed through our bulletin and website.

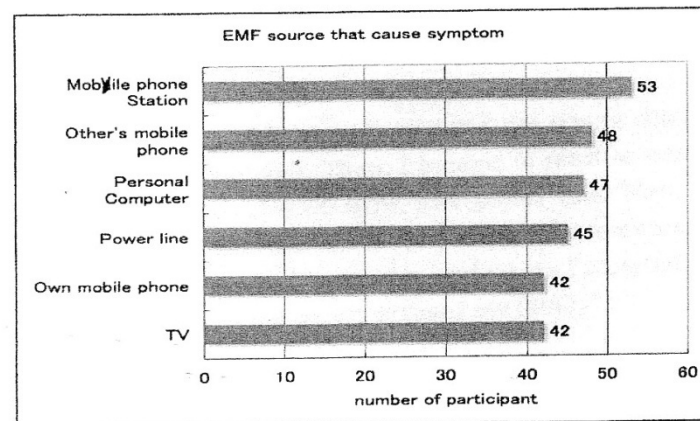
The valid response was 75(female: 71, male 4), and average age was 51.2 years old (female: 51.1, male 53.3).



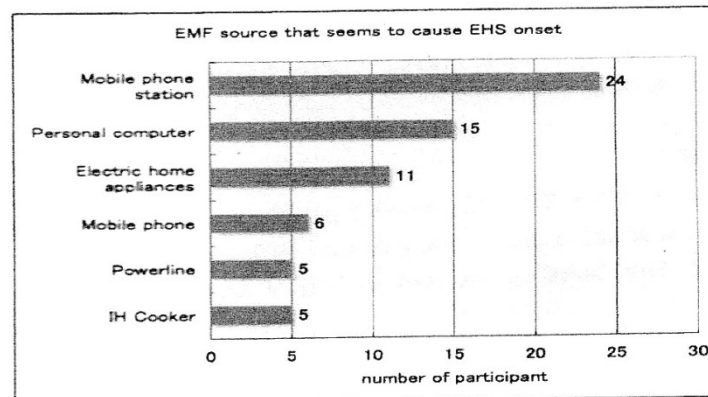
by Kato Y.



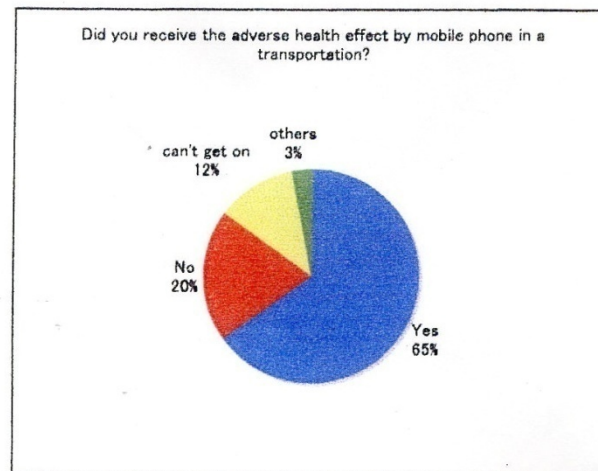
EMF source that cause to symptom,  
or seem to cause EHS onset.  
Main cause is mobile base station.



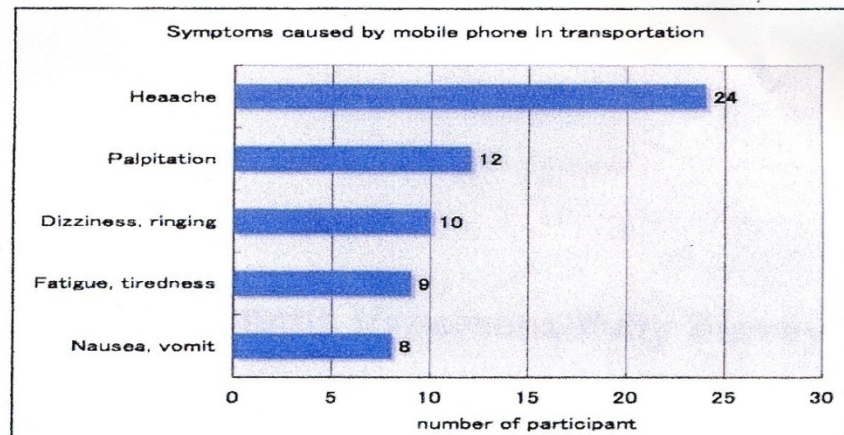
by Kato Y



# Symptoms caused by mobile phone in transportation main part is Headache



by Kato.Y



# Japanese provocation study

## Furubayashi et al:2009

Bioelectromagnetics. 2009 Feb;30(2):100-13.

### **Effects of short-term W-CDMA mobile phone base station exposure on women with or without mobile phone related symptoms.**

Furubayashi T, Ushiyama A, Terao Y, Mizuno Y, Shirasawa K, Pongpaibool P, Simba AY, Wake K, Nishikawa M, Miyawaki K, Yasuda A, Uchiyama M, Yamashita HK, Masuda H, Hirota S, Takahashi M, Okano T, Inomata-Terada S, Sokejima S, Maruyama E, Watanabe S, Taki M, Ohkubo C, Ugawa Y.

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#### **Abstract**

To investigate possible health effects of mobile phone use, we conducted a double-blind, cross-over provocation study to confirm whether subjects with mobile phone related symptoms (MPRS) are more susceptible than control subjects to the effect of electromagnetic fields (EMF) emitted from base stations. We sent questionnaires to 5,000 women and obtained 2,472 valid responses from possible candidates; from these, we recruited 11 subjects with MPRS and 43 controls. There were four EMF exposure conditions, each of which lasted 30 min: continuous, intermittent, and sham exposure with and without noise. Subjects were exposed to EMF of 2.14 GHz, 10 V/m (W-CDMA), in a shielded room to simulate whole-body exposure to EMF from base stations, although the exposure strength we used was higher than that commonly received from base stations. We measured several psychological and cognitive parameters pre- and post-exposure, and monitored autonomic functions. Subjects were asked to report on their perception of EMF and level of discomfort during the experiment. The MPRS group did not differ from the controls in their ability to detect exposure to EMF; nevertheless they consistently experienced more discomfort, regardless of whether or not they were actually exposed to EMF, and despite the lack of significant changes in their autonomic functions. Thus, the two groups did not differ in their responses to real or sham EMF exposure according to any psychological, cognitive or autonomic assessment. In conclusion, we found no evidence of any causal link between hypersensitivity symptoms and exposure to EMF from base stations.



# summary

A lot of people who live around the base stations of mobile phone are worried about EHS in Japan.

It is necessary to do not the short-term provocation study, but a large-scale epidemiological study, immediately, in Japan also in Sweden.