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THE FINNISH ELECTROSENSITIVITY FOUNDATION

What is electrosensitivity?

When we talk about electrosensitive people we are talking about individuals who are sensitive to electromagnetic fields (EMF) and experience symptoms when exposed to them, even if their exposure remains within the recommended limits. According to experience, their symptoms ease off as their exposure to EMFs decreases.

Electrosensitive individuals report discomfort even when using normal home appliances and electronics. For many, the symptoms are related specifically to devices that generate radio frequency electromagnetic fields (RF-EMF), such as mobile phones, computers and mobile phone base stations. Some electrosensitive people report reacting to only low-frequency EMFs, which are generated by some home appliances and high-voltage power lines, among other things. Others have noticed having symptoms when exposed to a range of different frequencies.

Electrosensitivity and other environmental sensitivities

Environmental sensitivity means sensitivity to a variety of factors in the environment that cause symptoms to some individuals but cause no symptoms or harm to the majority of population. The most common types of environmental sensitivities are sensitivity to smells, multiple chemical sensitivity, electrosensitivity and sick building syndrome.

In 2010, a population-level survey was conducted in Sweden, examining how many of the respondents had experienced various environmental sensitivities and whether their multimorbidity was likely or merely coincidental. The survey revealed that one type of environmental sensitivity increased a person's predisposition to react to other types of environmental exposure. The largest group of respondents with environmental sensitivities suffered from multiple

chemical sensitivity. The second most common type of sensitivity was sensitivity to normal sounds. The third most commonly reported cause of symptoms was indoor air. The least common form of environmental sensitivity was electrosensitivity.

According to WHO, electrosensitivity and multiple chemical sensitivity have many similar characteristics. An Italian study published in 2014 found that there was significant multimorbidity between the two types of environmental sensitivities: 95% of the electrosensitive individuals participating in the study also reacted to chemicals to a varying degree. While the types of exposure linked with environmental sensitivities vary, in reality the symptoms are relatively similar.

Typical symptoms of electrosensitivity

WHO noted in 2005 that some individuals were reporting health problems caused by electromagnetic radiation, with symptoms typically including redness, tingling or a burning sensation on the skin. The symptoms could also be generic, such as fatigue, exhaustion, difficulty concentrating, dizziness and heart palpitations. According to WHO, symptoms vary between individuals. A combination of these symptoms is not part of any known syndrome.

The symptoms of electrosensitive people in Finland were studied through a survey carried out by the Radio and EMC Laboratory of the Turku University of Applied Sciences in 2011–2012, which gathered information on the symptoms or illnesses that the respondents had suffered during the different stages of electrosensitivity. Approximately two hundred Finns who identified as electrosensitive responded to the survey. At the acute stage of electrosensitivity, the most common symptoms were stress, sleep problems, muscle and joint pain, and unusually increased levels of tiredness. Burning or tingling sensations on the skin were also common, as were difficulties concentrating, dizziness, arrhythmia and sensitivity to light.

Some 35% of the respondents reported being allergic to at least one or two substances before the onset of electrosensitivity. Once electrosensitivity

symptoms had begun, their allergic tendencies were also exacerbated and 44% of the respondents reported having symptoms from at least one type of exposure. If a respondent was allergic or sensitive to one food, this typically involved domestically grown cereals. The most commonly mentioned were reactions to wheat or foods containing wheat. Dairy products were another poorly tolerated group of foods. They caused symptoms in 25% of the respondents.

Proneness to allergies linked to electrosensitivity has also been reported by people with multiple chemical sensitivities: according to an international study, they had more allergies than the population on average.

What type of devices and environments cause symptoms for electrosensitive individuals?

The study conducted by the Radio and EMC Laboratory of the Turku University of Applied Sciences attempted to reveal the types of devices that typically caused reactions at the different stages of symptoms. It had been noticed that, in practice, electrosensitivity is divided into three stages: the time before the symptoms appear, the acute stage, and the time after the acute period.

Typically, the first symptoms were caused by using a computer or mobile phone. The most common problems at the early stages of symptoms were linked to fluorescent lights, watching television and using the microwave. Relatively new cars and nearby mobile phone base stations would also typically cause symptoms. After the acute stage passed, reactions to common household appliances, such as refrigerators, washing machines and televisions, decreased substantially. However, after the acute stage, reactions to wireless networks and mobile phones became more common.

The respondents were asked to mention whether they had noticed that particular places or buildings had caused symptoms that they associated with electricity or radiation. Of those who responded to the open question, 48% reported having had symptoms in large shopping centres and supermarkets. Public buildings, such as government offices, libraries and hospitals had proved problematic for

38% of the respondents. Certain methods of transport – most typically the train – were mentioned by 20% of those who responded to the question.

Treatment of electrosensitivity

Environmental sensitivities have increased substantially, but so far no general guidelines for patients have been issued in Finland. Environmental sensitivities were included in the Finnish edition of the ICD-10 disease classification code in 2014 under R68.81: Continuous or recurring exceptional sensitivity to common environmental factors. This classification should be used to facilitate the treatment of patients and the statistical recording of cases. The classification does not entitle sufferers to any benefits from the social insurance system.

With the right measures, electrosensitive individuals can find relief for their symptoms and enjoy improved functional capacity. To alleviate the symptoms caused by electrosensitivity, it is advisable to avoid devices or environments that generate EMFs to prevent exacerbating the symptoms.

In the electrosensitivity study of the Turku University of Applied Sciences, 76% of respondents said that reducing exposure to and avoiding EMFs were the most important ways to relieve symptoms. A simple and healthy diet was found to be beneficial for 69% of respondents. Various nutritional supplements were helpful for 68% of those who had tried them. The most common supplements used by the respondents were omega fatty acids, magnesium, vitamins C and B, zinc and selenium. Increased exercise helped ease symptoms for 62% of respondents. Walking outside in the fresh air and swimming in natural waters were found to be particularly helpful.

The consequences of the current health paradigms

Electrosensitive individuals often encounter belittling or stigmatisation, because no widely accepted, proven scientific theory, or health paradigm, currently exists to explain how and why the syndrome develops. In environmental research, there

has been criticism that current health paradigms do not sufficiently address the problems that an industrialised lifestyle that creates environmental problems can cause. Health care practices are quick to marginalise and hide environmentally sensitive patients under various mental health classifications. As a result, those suffering from environmental sensitivities can be pigeonholed within the existing system, in which psychiatry is used to manage those who react to technologies in an unusual manner.

Electrosensitivity as a functional limitation

Electrosensitivity impairs an individual's capacity to function as a full member of society. According to WHO, most electrosensitive people experience mild symptoms and cope with daily life by avoiding exposure to the best of their ability, but are often forced to leave their jobs or change their way of life because of electrosensitivity. According to WHO, some 10% of all electrosensitivity sufferers experience severe symptoms.

There is only a small amount of statistical data about the functional capacity of electrosensitive people in Finland. The severity of the functional limitations caused by electrosensitivity are illustrated by the fact that 52% of respondents to the survey of the Turku University of Applied Sciences were able to work.

The major challenge that electrosensitivity sufferers face is the difficulty for others to understand and accept a problem that they themselves cannot observe. Therefore, electrosensitivity is often met with negativity, which in turn has an impact on many aspects of life, such as employment, housing and health care. Many people with multiple chemical sensitivity have noted that the lack of social acceptance is the most difficult aspect to bear in their disease. In addition to the negative attitude of their community, the daily lives of electrosensitive people are also made more challenging by the difficulty of using services. For example, hospitals, libraries and theatres are in practice out of bounds because of the wireless devices used in them.

In Sweden, electrosensitivity is acknowledged as a genuine functional limitation but it is not classified as a disease or a medical condition. A functional limitation is not considered a specific individual characteristic, but rather a set of difficulties that cause an individual to be unable to function in certain environments. In Finland, the symptoms are understood to represent a functional disorder that is disabling and causes various degrees of impaired capacity.