

<http://ki.se/en/people/olljoh>

<https://www.youtube.com/watch?v=x-yt-cl=84838260&v=I5udG8OCZWY&x-yt-ts=1422327029>

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DR. OLLE JOHANSSON IN BARCELONA – TRANSSCRIPT SPEAKING TO A GROUP OF MEDICAL DOCTORS

It's a tremendous honor to be here. I'm very happy to have been invited as a guest lecturer today. I will just start to introduce myself

I will talk a little bit about health effects of electromagnetic fields and I'm a neuroscientist and I work at the Karolinska Institute you see me down here and you know we are famous since we had out the Nobel Prize in Medicine or physiology I have also worked at the Royal Institute of Technology which looks like this. It is also in Stockholm and their people are connected to the Nobel Prizes in chemistry and physics. Electricity had been introduced by mankind to ease our lives. Thanks to that we could have electric lights, we could run computers and we can use electricity in our daily work.

And of course, when electricity was introduced it was only for good reasons but very soon, first in United States, Norway and Sweden certain persons started playing adverse health effects and the idea about the Electrohypersensitivity (EHS) was born 1979 a very famous paper was published by Nancy Wertheimer and Ed Leeper who had found **an association between electromagnetic fields and childhood leukemia** and that was start of the very important field which led to that the World Health Organization has cancer classified power frequency magnetic fields which is a long word for household electricity. OK.

If we then talk about electrohypersensitivity (EHS) for a few moments and in Sweden and actually all over the world in all countries that are members of the United Nations, it is classified as a **functional impairment that means it is not a disease**. As doctors, you have nothing to do with it and it's for the Municipalities and special civil servants that deal with disabilities or nowadays functional impairment.

And as you have noticed I am functional impaired. I cannot speak Spanish and this is the United Nations definition meaning that every person in his or her life many times will be functional impaired. You will be when you come to Sweden if you cannot speak Swedish and at the same time and this happened at the year 2000 the Nordic Council of Ministers classified the symptoms as an occupationally-related symptom-based diagnosis according to the **ICD-10 diagnosis criteria meaning that you can't prescribe medicines** for a person that has functional impairment. When I cannot speak Spanish I may get a headache and then I could go to you gave me some aspirin. So the symptoms you can deal with but not the functional impairment. In Sweden the persons with the electrohypersensitivity had their own handicap organization which is called the **Swedish Association for the Electrohypersensitivity**. They are also included in the very big Swedish Disability Federation and a lot of law texts apply to them. In Sweden the municipalities follow what is called the **United Nations 22 Standard Rules on the equalization of opportunities for people with disabilities** and since 2007 it has to be upgraded into the **United Nations Convention on Human Rights for Persons with Functional Impairments**.

And my whole lecture can be actually summarized in a one sentence when we talk about electrohypersensitivity (EHS) because **all people with functional impairment such as electrohypersensitivity are entitled to have an equal life in a society based on equality**.

I didn't write this, the United Nations wrote this and they also say that one of the most important principles to achieve is the one about complete accessibility. So people with different impairments should have accessibility to everything regardless of what kind of impairment they have.

In Sweden impairments are viewed from the point of the environment. That means that no human being is in itself impaired there are instead shortcomings in the environment that cause the impairment that's, it is the environment that should be treated not the persons and the persons are completely normal and healthy but they react to inferior environment and in Sweden we have a lot of different law texts that regulates this including the Human Rights Act of the European Union and the United Nations regulations

and this is a very interesting action plan and in Swedish it says something very important. It says that they should move from being patients to citizens

This has a lot of implications, for instance, "to force a person to quit one's employment or to move from one's home is a very serious legal violation. You are never allowed to do that.

And the same goes for children – you are not to allowed to discriminate them from their education rights. Never you must make their schools accessible. So, in essence, it is actually very simple with functional impairment like electrohypersensitivity. They should just enjoy their Human Rights: Nothing more, nothing less. Or Do you not agree? Just think, for a moment, if your loved ones have EHS what would you then want for your country or if yourself were EHS how would you like to be met?

We then move to some scientific studies about electrohypersensitivity and if people and the these are from microscopes images of the human skin and at the top you see epidermis uppermost layers and here is the rest of the human skin or the dermis and people with EHS if they are subjected to computer screens for instance all these cells you see here they all the way, they will move away and the interesting thing is that this picture here is a classical radiation damage which you can get from plutonium, uranium, radio, x-rays and strong ultra violet light but this had only be sitting from a computer screen nothing more.

Furthermore, if you look on the classical mast cells which are the keys cells for allergies and asthma and over sensitivities people with electrohypersensitivity have a very strong activation again the classical text book image of the radiation damage these are normal healthy volunteers and here people with EHS and therefore it seems as if they have just a radiation damage from different gadgets in our society.

This activation of the mast cells combined with our knowledge around one molecule named histamine can explain all the symptoms

that people with EHS have. It is nothing peculiar, It's just classical textbook explanations based on mast cells and histamine. Mast cells and histamines are of course everyday problems for any doctor. Furthermore, if you just, sorry, if you just look here and there if you take normal healthy volunteers that they do not have Electrohipersensitivity and put them in front of computer screens or ordinary household television sets they don't sense anything, they don't feel anything but the cells increase in number as if they would have gone to Fukushima in Japan but they are still in Sweden just watching television and this is after two hours.

Again mast cells and the content of histamine. This points to that all people are EHS and other scientists have shown that both 50 Hz magnetic fields as well as 915 MHz microwaves induced the same responses in lymphocytes from healthy and EHS (Electyrohipersnsitive) donors.

So that means that the people with electrohipersensitivity they react to an environment which we do not react to and therefore they seem to be a biological indicator or the classical yellow canaries bird in the coal mine reacting to something that is dangerous and we should actually be very, very happy that they have reported that something is not so good because you will soon see that **there are long term health effects that they are very, very scary for the rest of the population.**

Other scientists have shown and now and again we are talking the human mast cells lines that mast cells that are kept in cells cultured in a small jar in a culture cabins they don't like to use a mobile phone they react as if they would have been an allergy such as pollen or nickel. And I do not know for Spain but in Sweden the last years we have had an explosion of asthma, allergies and other sensitivities.

It's just the biggest problem in the Swedish health society right now. It's huge. You see that on every slide I show the first page of the actual scientific paper and they are all from preview base scientific journals some of them on them of high in pair nature.

So, you see I am not solo making the story up it's all in here and the citations are good by good from the actual papers here. In Japan, Hajime Kimata has shown that patients we atopic czema/dermatitis they get worse when they are irradiated by microwaves from mobile phones. So eczema/dermatitis patients should definitely avoid mobile phones. In Sweden there was various explanations introduce to explain electrohypersensitivity (EHS) and many of them were just taking away on random out of imagination but one explanation was that this is actually a mass media driven psychosis. When journalist and reporters

write about this then people sudden start to feel that. Well I am probably electrohypersensitivity, too. But it is very easy control for such mass media driven psychosis because you can use, for instance, rats. And rats they do not read newspapers, they do not listen to radio, they do not watch television and still they react dramatically to such exposures. So no mass media at all involved here. Some very short descriptions here

Many people with electrohypersensitivity seems to have tinnitus, this ringing sensation in the auditory system again something that's really increase dramatically in Sweden and Scientifics like myself and then others have shown and association between these different gadgets.

I have collaborated with people in other countries like in Japan and in Japan people with EHS have the same problems as in Spain or in Sweden or whatever. So they need our support and also I have collaborated with people in Finland and we have tried to use shielding protection and that was very well for people with EHS.

if you take away all the electromagnetic fields then suddenly they could function and work and everyone is very happy with that.

At the same time, I don't want to live in a society where we first buy things and then we need to go to another shop and buy protection that it is not a democracy and therefore already 1997

I suggested that one should reduce the public exposure and here in Spain you should if we talk about mobile phone irradiation you should take 9.000.000 uW/m² that's the maximum exposure recommendation. But the natural background is down here (0,000.000.000.000.001 uW/m²) ; this is what your cells and molecules are accustomed to and therefore I said the only generic hygienic safe value is this (0,000.000.000.000.001 uW/m²) and that means that **we need to reduce the exposure in the order of one million, billion times. Ten up to the power fifteen times.** Then we are down to the natural background and then it is safe.

Mobile phone and mobile telephony and wireless systems in general have been a very sweet piece of candy for Sweden, Finland, United States and so on. We had Ericsson, Nokia's consumer electronics and Motorola for instance. And we have gained an enormous income from that. Sweden is one of the richest countries in the world.

We are absolutely swimming in money. It's just terrible say that, but that's the true. There is only one country that is really richest that is Norway. they have more money to swim in it. But you know when we eat candy and eat, eat and suddenly agh! No so good any longer. You know. You have eaten a little too much and very early and now it's time for you to train your Swedish. This is a debate article in Sweden that we write in newspapers, tabloids and magazines and journals and so on and this is from the largest tabloid XXXXXX in 1995 and I wrote an article saying: how dangerous are mobile phones. This is not me. This it's me. I saw all the women were looking side wards Sorry from that. And I asked a few questions and unfortunately they had not yet answer.

I coined in 1993, you had not even born I coined an expression that says: "**the largest full-scale experiment ever**".

What happens when we 24 hours around the clock wherever we are allow ourselves and our children to be used as a guinea- pigs whole -body -irradiated for the rest of our lives. Since these electromagnetic signals are everywhere. They can penetrate anything. And you know Swedish are very boring, they are dull, and they repeat themselves very often. And I have repeated myself year after year after year after year after year and now we're here and still very little it is actually done by people in responsibilities in power and we are not.

The persons that are responsible for this is always governments and parliaments and health agencies and they do very little. I will show you a few examples where people actually have done something.

1994 in Sweden if you really love your family then you should buy the Christmas gift of the year which was this one and maybe this was a very stupid and dangerous Christmas gift and maybe mankind will have to pay for this and not only mankind all biological systems are at jeopardy, all animals, all plants all bacteria and so on are affected by this.

Probably, if we should look around in all the effects that have been published in scientific papers and trust me we're talking about tens of thousands and thousands of papers. There is an enormous amount of information and probably the most dangerous effect is the DNA fragmentation.

Such fragmentation shown by Henry Lai, NP Singh in 1996 <http://www.ncbi.nlm.nih.gov/pubmed/8627134> Single- and double-strand DNA breaks in rat's brain cells after exposure to mobile telephony and such fragmentation can cause loss of fertility, impairment of the immune system, debilitation of the cancer defenses and could predict genetic damage for future generations. When Lai and Singh published their data a number of other Scientifics replicated their studies and found the same results then the telecom industry got, and I am sorry for the English, they got pissed, they got angry and said no. They are wrong there is not effect on the DNA and Lai and Singh are just amateurs. They have not done this correctly. So the telecom industry took one 100 million Euros and gave it to 12 laboratories in seven European countries that should replicate in a very control way the studies on DNA and so they did. They worked very, very hard and when the cohort, the blind cohort was broken, unfortunately these laboratories have shown that Lai and Singh were right. Do you believe me when I say that the telecom industry went to bizarre the measures trying to stop the publication of this study. They did everything they could to stop it but they could not. It is in the public domain and it's called THE REFLEX STUDY. And I'll show you one picture from it.

When you break, destroy the DNA you get small fragments and when they move in an electrophoresis field they will leave a tail of small pieces. This is a DNA which is undamaged,

This is a DNA which has been subjected to 1600 chest x-ray and then you see this tail and it's called the comet assay. It is like a comet on the sky with the tail. No patients in Sweden have got 1600 chest x-rays but this is the way it looks and it looks the same after 24 hours of mobile phone irradiation at so called SAR levels, specific absorption rates of 1.3 watts per kilogram and you are supposed to stand 2 W/Kg so in your body right now you have these. We can be dead sure about that.

And finally the same slide has also shown that this is an accumulative effect. The more irradiation, the more damage and I will go back to the previous slide and just remind you very few customers use their mobile phone only for 24 hours in the whole life.

they use it every time, every day and they also have these Ipads, wireless routers, computers etcetera and they are constantly exposed and the question is: Is this safe or not?

Other such effects that had been seen at very low exposure levels and I don't have time to go to into all the papers that are relevant here but one such study is the leakage of the blood brain barrier seen at 400 uW/Kg and remember you should be able to take 2 W/Kg, sorry!, 2 W/Kg so this is five thousand times below what is supposed to be safe and although that are doctors you know that do not want to have any leakage of your blood brain barrier, but we must assume that you have and in Sweden and another countries we see a lot of effects that are all brain-derived nature something it is not okay with people brains any longer. Maybe this is part of the explanation. And I just talked about this. You remember 2 W/Kg you should be able to take but as you see from this slide and is one of many, many slides showing that below or very much below or very, very much below these 2 W/Kg you see effects on eating and drinking behavior, calcium efflux (fluxes), DNA effects, the EEG brain alterations, leakage of the blood brain barrier and changes in cell cycles and cell proliferation. As you see these Scientifics 1997 they are one 100 thousand times below the safe level.

And again You do not want to have any cells cycle or cell proliferation changes in your body. Definitely not.

After a number of years, I felt very strongly that we as scientists had to do something more than just been in our laboratories and check test tubes and microscopic slides and that kind of things. So I said we need to get together and start writing and publishing resolutions around these questions and you know in science that is very, very, very rare, that is very seldom that scientists get out into the reality. Doctors are in the reality scientists they are in their laboratories.

But we felt we needed to get out.

And in Italy 2006, in Benevento, in February, we met. We sat down and talk for several days and then we worked for many months and finally published this Benevento Resolution and I will not go to through all of it but you can see that the main points are put apart. We said that arguments that weak electromagnetic (EMF) fields cannot effect biological systems do not represent the current spectrum of scientific opinion. We also said that precautionary principle should be employed. We said that we must inform the population of the potential risks and we said that we must limit cell phones and cordless phone use by young children and Teenagers and also ban telecom companies from marketing to them. We must protect the children I mean, if I would die here and now that doesn't matter at all. I mean, you will be shocked, but that's all. But if the children are affected then there isn't any future any longer. One thing that we also decided was that someone had to do a compilation of the scientific evidence. To put it together into some kind of report and when you decide something you often end up having to do it yourself and so we did. We sat down for nine months and it's important to remember we didn't have any resources:

Not one euro, nothing. So we had to do in our free time, in evenings, weekends, holidays that kind of things. And after nine months we had just to say: stop. We couldn't continue.

But then we had written approximately six hundred (600) pages, printed text and we have summarized approximately to thousand scientific references and 2007 August 31, it was published and the name of it is the **BioInitiative Report** and to summarize it into one single sentence it is actually this:

we asked for **Biologically-Based Public Exposure**

I will not go through the Bioinitiative Report that it will take months actually to do it , but what happened the year after , September 4 , 2008 the European Parliament voted 522 to 16 to recommend tightest safety standards for cells phones and they said the public exposures limits were completely also obsoleted and they included all kind of technologies everything in the radio frequencies field and we were , of course, very, how do you say very flattered, we were very happy , very glad , very impressed because how many times in your life do you write something that the European Parliament reads and it was after a six hundred pages (600 pages) ; so they have been reading a lot , you know. and then they came out with this.

So, we were very, very, very happy, but then something very odd happened.

The Telecom Industry came and said wow! this is a good idea, but Olle Johansson and his coworkers cannot do this. We should do the work to recommend new exposure standards. The Telecom Industry should do it instead and they did and they came out with that there is no need to change anything. Surprise, surprise!

The problem with the Bioinitiative Report was that, do you remember that was published August 31, 2007, the day after when I came to my workplace they were already three new papers that had appeared overnight and they should have been included in The Bioinitiative Report and since then thousands and thousands of new papers are arriving at the very quick pace.

And I will just quickly show you a few ones.

For instance, scientists have shown that cell phones decreased the semen quality in men and you see it by decreasing the sperm count, motility, viability and the normal morphology is changed into an abnormal morphology. As you know in Europe, for instance, there is a catastrophe going on when counts to male sperm fertility issues.

It has been calculated that the last genetic inborn Italian will be born in about 50 to 100 years' time.

Then, it is over for Italians, and the same goes for other European countries. In Sweden the sperm quality has gone like this, really, it's just a dramatic effect. Other scientists have studied the effects of radio frequency radiation and shown that mice end up in irreversibility infertility. If we translate that into the Spain it could be and I hope not of course, but it could be that young men and women cannot get babies any longer in Spain in approximately 150 years' time because something we did today.

When pregnant women as well as newborns are exposed to mobile phones signals, the babies in the women or just newborns they get stress. They get increase in heart rate and a decreased in the cardiac

output. Their heart goes like this and when I asked mothers and fathers if they want to have such an effect on their babies they always say no and still they use all these gadgets around the babies.

So, the babies are stressed if that is good or bad for them, I do not know, but the parents do not want it to happen, but it does. This is probably one of the most famous and maybe also of the most important studies ever done in this field. French scientists headed by Alain Vian, and his coworkers (Catherine Faure,¹ Sébastien Girard,² Eric Davies,³ Francis Hallé,⁴ Pierre Bonnet,² Gérard Ledoigt,¹ and Françoise Paladian). They had allowed tomato plants to be exposed to radiation from base stations and the tomato plants and will quote the French scientists:- “they reacted as if they had been crushed with a hammer”. You know when you cut in plants or what you cut the grass or whatever you do the plants since they are alive will react with a damage sequence of molecules including a molecule called calmodulina. The tomato plants no one touch them. They were only exposure to the base station radiation as everyone is all day around and night around everywhere in society and then they reacted as if they would have been crushed with a hammer. We invited this scientist to a very important meeting but then he had been offered a new job and he did not work any longer with this.

In 2009n this was mentioned as one of the most important publications in all scientific fields all over the planet and suddenly they were not doing any think longer. I think that’s all. Other Scientifics had put the mobile phone next to bee hives for honey bees, then the honey bees leave and they never come back. Further scientists had put mobile phones close to ants and in a restrain space and if you put the mobile phone there, the ants will move their babies to the other end of the area and they will move the toilet out there. They will take their eating area and sleeping area and moving away from the radiation source. If you take it away they will rearrange this area moving the baby’s back, taking the toilet to where it was and so on. So they are extremely sensitive to this, but honey bees and ants are not the consumers, we are. And we cannot move away. We are constantly exposed. Also when comes to effects on the central nervous system scientists very early could show that, for instance, rats showed a retard learning capacity and it was through decrease short term memory and decrease concentration capacity. If you wish a Sweden school nowadays It’s like the second world war in the schoolroom the children cannot concentrate and they cannot remember a lot though the things that the teacher says. Maybe this could play roll in it. And to make things worse. Scientists have studied boys in a linguistic test and when they were exposed to a mobile phone radiation they came out from the test less good.

Their learning capacity were impaired. And I thought that all countries want to have the best students, the best pupils, so we can compete with each other and some countries have look very closely at this. For instance, the People’s Republic of China they keep their children away from radiation sources because they want to conquer the world. they want to be the biggest democracy, the richest country and so on. And the way to do it is to have the best educated population. But in Sweden we are going to the other direction. We give children more and more and more these gadgets: at home, in the school and if you look on teaching and learning current in Sweden unfortunately it’s like the curve down. It’s like this. And it’s a national crisis nowadays. Politicians are so stressed because Swedish pupils are falling behind so quickly. Now, the very interesting area of investigation was the idea that women maybe get breast cancer from the radiation from computers, mobile phones, wireless indoor phones and so on but no scientists could actually show it but what was shown is that electromagnetic fields (EMF) reduce the efficacy of Tamoxifen what it is the primary drug to treat breast cancer.

So, you got a situation similar to Tamoxifen resistance meaning that women die not from directly effects but indirect effects. But, no one has changed the treatment strategy I know the way in Sweden, for instance, that any cancer doctors say that: hey! you cannot exposure yourself when you take Tamoxifen. You must stay away. I never hear that but it is clear. The interesting thing is that this Journal by electromagnetic is an industry control Journal so, but still they are allowed to publication of this paper. We have read a number of other resolutions as I said being Scandinavian we constantly repeat ourselves and we will probably have to repeat ourselves so many years to come. And one of this is called The London Resolution is from 2009 and again a huge number of good points. And one thing we said was that we propose that children under 16 should use mobile phone and cordless phone for an emergency calls only. No Wi-fi, Wimax or other forms of wireless networking are placed in homes, schools or public areas.

Many of you may think that it is not idea. That is that here to write and publish such things, society will never change, no one will listen, children and teenagers don't care, they just use all of it; but when I die I want the last thought to be I did my best not I could have done better. One thing that we also decide to do and that was after the industry has said OK! the industry will come up with the new public exposure guidelines and as you understand they didn't do anything then we said we cannot let them just get away with this .We have to sit down and so we did .In Seletun which is in Norway and we did it in 2009 and the actual paper was published in 2010 and it is a very, very , very good and very important summary if you don't want to read all the pages of the Bioinitiative Report and so on. You can just read this paper. It's about 10 pages long. And it says, among many things that: low-intensity so called non-thermal bioeffects and adverse health effects are demonstrated a levels significantly below existing standards. The public safety limits are inadequate and obsolete with respect to prolonged low-intensity exposures. And new biologically-based public exposure standards are urgently needed to protect public health world-wide. And Finally, it is not in the public interest to wait. That was the year 2010, what does happen since then? And I will very shortly summarize all the things. But, one very important issue for you it's and you know in English, Englishmen say : "never trust a pretty face"; you should not trust me and you should instead go to the literature. Today I spent time on 10- 15 publications.

There are approximately 25,000 more for you to read. You have to read them and you have to think and read and think and finally come up with a decision for yourself and for your family and if it goes to hell don't blame. I told you that you had to read for yourself and I told that to people around the world including the Pope; I told it to Presidents, Emperors, Prime Ministers, Governments, Parliaments, Health Authorities and so on. And I'm constantly send submissions to expert panels. The last two weeks I did it a huge number of such expert panels in Canada and we send the information and say: they! there is a lot more out there, please consider this if not for yourself at least for the future generations, at least for children that they are yet to be born. Think about them. And also don't be so afraid we are all talking about toys.

If all these gadgets suddenly will disappear nothing will change. You will still breathe, eat, go to the toilet, sleep, love, hate. Nothing will be altered. Life like will continue but the question is what would happen when you 24/7 all body irradiated. Everything on this planet at levels that are only to be a understood in biblical terms. So, what it has happened in 2011, in 2012 and even in 2013. I will just give you a few more examples. In May 6, 2011, The Council of Europe said that mobile phones and wireless networks must be banned in schools. Their Council Europe committee examined evidence that the technologies have "potentially harmful effects on humans, and concluded that immediate action was required to protect children, not tomorrow but today. Now we must do it. May 31, 2011 then the World Health Organization through its cancer organ call the International Association for Research on Cancer (IARC) classified radiofrequency electromagnetic fields as possibly carcinogenic, in class 2B and then you have to remember that the World Health Organization has a class 4 for things that are proven safe and you know when you buy a gadget like that everyone says this is a this safe, this thing is safe. these, these and so on. They are all safe but the World Health Organization doesn't think so because then it would had set class 4. You remember ten years before that, 2001 power frequency magnetic fields what also cancer declassified regarding childhood leukemia. And power frequency magnetic fields is the same as household electricity. October 12, 2012 The Italian Supreme Court ruled that mobile phones can cause cancer in a patient and finally now we are here in Barcelona and maybe the answer to the question is: no more full-scale experimentation. You know now in Stockholm It's very dark and it's very cold. You don't want to go there but in the summer times Stockholm is very nice and a lot of tourists come to Stockholm and there are tourists from all over the world: American, Japanese, Chinese, people from South America, Africa from Germany, England and so on and when Swedish walk around Stockholm, we see these groups with cameras and son on, you know. Sometimes, we see group of people that look very happy say: "oh, they are from Spain". Thank you so much for your attention!!

[Dr. OLLE JOHANSSON in Barcelona – speaking about EHS | Coalition to Stop Smart Meters in BC](#)