

**Transcript of 1/4 ~ The Hidden Dangers of Wireless & Cell Phone Radiation ~ Arthur Firstenberg ~ English subtitles**

**Video:**

**<https://www.youtube.com/watch?v=rh0dphQZxJ0>**

Interviewer: Your concerns are of a nature that are not well recognized in our nation.

Arthur: Not yet. They're not well recognized in very many places in the world yet.

Interviewer: But in some countries they have been studied pretty well, haven't they?

Arthur: In Russia and in Ukraine and in the former Soviet republics, yes, they were studied quite thoroughly. Unfortunately, when the iron curtain fell western telecommunications companies invaded that part of the world and now everybody there is also addicted to their cell phones. So although, on the books, they officially have greater protective measures and more stringent limits, in practice it's not very different from here, and the average public does not know it any more.

Interviewer: Aha.

Arthur: Although they are still teaching the effects, the biological effects of radio-frequency radiation in medical schools in Russia, at least.

Interviewer: So maybe we could begin, by talking about the electrical nature of life and how the brain and the heart and our nervous systems are essentially like finely tuned electrical systems.

Arthur: Yes, they are, and we're kind of schizophrenic about that in science, in medicine. I went to medical school for three years. And, we use electricity incredibly much in diagnosis and often in treatment of various diseases, electrocardiograms, electroencephalograms, electromyograms, X-rays, MRIs, we use it to restart the heart. There are PEMF devices - Pulsed Electro Magnetic Field devices - to treat various neurological disorders, mental disorders. But we're in denial about the fact that it goes the other way - that our cells are electric, that our nervous system operates electrically.

We tend to concentrate on the action potential as a signal that accompanies the movement of chemicals, the transport of sodium into our cells, the transport of potassium out of our cells, and we forget that the essential signal that begins [already] is electrical, and in fact, as we know from reading Dr. Becker's book, he discovered that the cells that used to be regarded as packing material, namely the Schwann cells, the perineural cells, that surround the nerve cells, actually carry electric current, and that our heart works electrically, and this is how electrocardiograms work.

If you stop the conductive pathways, your heart's gonna stop. So, yes! And our brain is increasingly, since the advent of cell phones particularly, our brain is increasingly being modelled as a very complex digital computer. And in fact that's probably not true. Also as Becker pioneered the work to show that there's a whole of aspect to our brain and our body and our organism, that is analogue and that transports real electric current, not just pulses of information. And this is consistent with what has been known for over 5000 years in China. Acupuncture is really a sophisticated electrical model of the human body. That was discovered long ago.

Interviewer: And they've thoroughly studied the way electricity flows through the body and the way our organs and our systems function in relation to the flows of energy and the blockages in energy and how to work with those things.

Arthur: Correct. And not only the flows within our body, but the flows into and out of our body. They have this concept of the Dan Tiens in Chinese medicine, and the chakras in Indian medicine, and the point at the bottom of your feet, Kidney One, in acupuncture is called Bubbling Springs. Why? Because that's where the energy or electricity – as is being studied by many people in China – to be equivalent - bubbles up from the earth into your feet. And the point on the top of your head is where it bubbles down, so to speak, from the sky. It's a continuous circuit between sky, through our bodies for acupuncture meridians, down into the earth.

Interviewer: Right, and the Chinese - they talk about it as between heaven and earth. And earth is electrical and our atmosphere is electrical as well, and there's a dynamic relationship between the two.

Arthur: Correct, yes, we live in what's known to atmospheric physicists as the "global electrical circuit". The upper atmosphere and the ionosphere are largely charged ions, electrons, protons, charged oxygen atoms, and electricity travels with great facility through the ionosphere, and everybody knows that lightning is an electrical phenomenon. What people do not so much know is that the earth is also a good conductor and conducts electricity. Our electrical utilities use that to good advantage because a lot of the returned current from your house back to the power plant actually travels through the earth. This is why houses and appliances are grounded because the earth is a good conductor.

And the part of the circuit that is remaining closes the circuit through the drift of atmospheric ions between earth and sky. And they go through our bodies, and this is the part of the electric circuit, that we actually live and breathe and stand and work in an electrical field that is about 130 volts per meter (V/m). This is what travelled from sky to earth via atmospheric ions through the top of our head through our acupuncture meridians and down into the earth.

Interviewer: And all life exists in a very similar way, from animals and insects, to plant life as well.

Arthur: Everything is completely dependent on it.

Interviewer: And affected by everything that is in the atmosphere electrically.  
Arthur: This is what's very important and this is why I wrote my book, this is what we, our society, is in denial about and has been in denial about for a very long time, resulting in the fact that we are broadcasting electricity now freely through the air without a thought as to what it's doing to us and what it's doing to our environment and I'm talking specifically now about wireless technology - cell phones and the like.

Interviewer: And throughout this book of yours, you share documented research and studies that demonstrate the actual effects of various forms of electrical technology on our physical health.

And before we get into that stuff, I thought that we could maybe explain the difference between some of these different technologies, how they're related, in the electromagnetic frequency spectrum.

Arthur: You're talking historically or what exists today? This is all of a piece. My book starts back in the 1700s.

Interviewer: Well, let's explore some of the history of it.

Arthur: Electricity was originally thought of as a property of life, back as far as Isaac Newton, and it was used originally in medicine for almost two centuries before we started using it intensively for lighting our houses and powering our machines. It was used as a panacea to treat many forms of diseases: deafness, blindness, paralysis, arthritis. You name it, people tried to cure it with electricity. That was called electro-therapy. And with success, in many cases.

In the year 1800, an Italian physicist named Alessandro Volta came along and invented the electric battery. And he made a momentous pronouncement - that electricity, in fact, doesn't have anything to do with biology. And there was a heated debate between him and his countryman Galvani, as to who was correct. Was electricity simply an aspect of life, that we have figured out how to make use of, or was it irrelevant and extraneous to life? And the view that it was extraneous [not related] to life won out. And we began to use electricity for things like electric lights - telegraph wires came first, actually.

In the beginning all we had was direct current, at first from friction machines, producing static electricity, and then the electric battery was discovered, and that was still direct current, only floating one direction from the positive to the negative pole. When alternating current was eventually discovered - so you have electrons oscillating in a wire back and forth, many times a second - what we have in our house wires nowadays, here in the US and in Canada - it vibrates back and forth 60 times per second. That's called 60 Hertz or 60 cycles [per second] electricity. In Europe it's 50 cycles.

Then you can oscillate that much faster and the other aspect of this is that

each time the direction changes, it creates a changing electromagnetic field. Every time you have electricity passing through a wire, even direct current around the wire you have an electromagnetic field, and it decreases rapidly with distance, but it goes out into the universe pretty much forever. A changing electromagnetic field produces a wave of changes that also travels out into the universe, and that travelling change in the electromagnetic field is called "electromagnetic radiation".

So when you have electricity going through a wire, it creates an electromagnetic field around the wire. When the electricity changes, for example when it goes back and forth - alternating current - it changes direction - the changes in the field radiates through space forever, and it's called "electromagnetic radiation". It basically is a signal telling every other wire in space, every other electron in space: move in this direction. When it hits an electron - it can be miles away - the electron that gets hit by that wave starts to move, so a changing electromagnetic field produces electromagnetic radiation. When that radiation hits a wire some place else, it induces an electric current in that wire. If it hits your body, it induces electric currents in the wires in your body. What are the wires in your body? They are your nerves, they're your blood vessels, they're your acupuncture meridians. So every time you get hit, by either natural or artificial electromagnetic radiation, it induces electric currents to flow in your body. And the problem is that alternating current basically doesn't exist in nature. To some degree it does - when lightning strikes, it produces very low frequency vibrations. The earth's magnetic field is direct current.

So most of what we live in, except for very low frequency waves from lightning, is direct current. We've introduced alternating current much more powerful than any natural fields that we evolved with. And we've increased the frequency way beyond anything that we've evolved with. So, when we get hit with radio waves from radio stations, and they're tiny tiny, very very high frequency radio waves from cell phones and cell towers, this also induces electric current in any wire and all the wires in our bodies, which we did not evolve with and which interfere with the natural electric currents that float through our bodies, that are not used to those kinds of frequencies, not used to those kinds of power levels, and our bodies are the equivalent of very complex electronic machinery that are getting interfered with.

Interviewer: And electrical engineers understand how various, more sensitive electronic equipment can be disrupted and even destroyed.

Arthur: It's called radio frequency interference and they have to harden all the equipment so that all this stuff that's flying around does not interfere with each other. But they forget that we are also very delicate electronic machines and we also have to be taken care of so that all this stuff flying around doesn't interfere with us. It's producing a soup out there of what you could call "dirty electricity".

We have this concept of dirty electricity in wiring, which you can easily detect

with an AM radio. If you have a hand-held, battery-operated, analogue - not digital - AM radio, and you tune it to the beginning of the dial, where there's no station. And you turn it on, if there was no dirty electricity around you, you would hear a gentle hiss. But if you bring it next to your wall, where there's a wire going through, and or next to an electric light switch, or next to an outlet, in most people's houses nowadays, the radio will buzz and scream, and produce all kinds of wild noises. That's called dirty electricity. Because all of these electronic devices are plugged into our walls, and they're producing high frequency alternating current of various weird kinds of stuff It is going into our house wiring and it is radiating at us, and this making us sick. And this has been called dirty electricity. Doctor Samuel Milham wrote a book called "Dirty Electricity" in 2011 and that's the basis for some of my research as well.

Interviewer: Out of curiosity, is there any such thing as clean electricity that isn't harmful? That's man-made?

Arthur: That's a good question! To some degree, all man-made electricity is harmful. And that has been the case since we started using static electricity, as you saw at the beginning of my book - that there was harm.