Wireless Radiation and Osteoporosis

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I was astonished by the number of people who contacted me after I broke my arm telling me they had broken theirs too – some of them this year, and others within the last few years. It occurred to me to wonder: has there been a significant increase in osteoporosis and bone fractures around the world? and if so, is this yet another health effect caused by the use of cell phones and their infrastructure irradiating our bones as well as the rest of our bodies?

I remembered reading some fascinating facts about bones in the groundbreaking 1985 book, The Body Electric, written by orthopedic surgeon Robert O. Becker. Bones, he discovered, are semiconductors, and they owe their electrical properties to being doped with tiny amounts of copper. The atoms of copper, he found, bond electrically to both apatite crystals and collagen fibers – the two main components of bone – and hold them together, "much as wooden pegs fastened the pieces of antique furniture to each other."

"Osteoporosis," wrote Becker, "comes about when copper is somehow removed from the bones. This might occur not only through chemical/metabolic processes, but by a change in the electromagnetic binding force, allowing the pegs to 'fall out.' It's possible that this could result from a change in the overall electrical fields throughout the body or from a change in those surrounding the body in the environment."

I also remembered, from the old Soviet Union literature, summarized in my 1997 book, Microwaving Our Planet, that radio frequency radiation redistributes metals throughout the body.

With these facts in mind, I have searched the world's medical literature for studies on the incidence of both osteoporosis and fractures, and the evidence seems fairly conclusive: (1) There has been an enormous increase in the incidence of both osteoporosis and bone fractures of all types throughout the world in children and adults since about 1950; (2) the incidences of both continue to rise, worldwide; (3) most studies published in the past couple of decades have found that osteoporosis in children is correlated with the amount of time spent daily looking at screens; (4) rates of osteoporosis do not correlate with the amount of time children spend sitting but not looking at screens; and (5) these trends are independent of the amount of exercise people get.

The authors of these studies have been at a loss to explain their findings, but they are easily explained when one remembers the electrical properties of bones, and the effects that cell phone and computer screens, all emitting radiation, are likely to have on bones and on the copper atoms within them – and that exposure to radiation from radio, TV, radar, and (more recently) cell tower antennas has increased tremendously since World War II.

Here is a sampling of the studies I have collected:

- Louis V. Avioli reviewed the world's literature in 1991. During the second half of the twentieth century, he found, both osteoporosis and fracture rates had risen dramatically in the United States, Canada, Norway, Sweden, Spain, Italy, the UK, Belgium, Australia, and elsewhere. The incidence rate of hip fractures in the United States had been increasing by about 40% per decade. (1)

- M.L. Grundill and M.C. Burger, in 2021, found that the incidence rate of hip fractures in a population in South Africa had more than doubled in men and almost sextupled in women compared to what had been reported in 1968. (2)

- Emmanuel K. Dretakis et al. found that the annual number of hip fractures in Crete increased 21% in just four years, from 1982 to 1986, while the population over 50 remained the same. (3)

- Hiroshi Koga et al. examined the records of children aged 6 to 14 in Niigata, Japan. The incidence rate of all fractures more than doubled from the early 1980s to the early 2000s in both girls and boys, and almost tripled in girls in junior high school. (4)

- P. Lüthje et al. found that the incidence rate of hip fractures throughout Finland quadrupled between 1968 and 1988. (5)

- In 2012 Ambrish Mithal and Parjeet Kaur found that hip fracture rates had increased two- to three-fold throughout Asia during the previous 30 years. (6)

- Hiroshi Hagino et al. found that hip fracture rates in Tottori Prefecture, Japan had risen by almost 40% between 1986 and 1992, and by more than 60% in men and about 50% in women between 1986 and 2001. Increases in fracture rates occurred not only in the elderly, but in people in their 30s and 40s. (7)

- In 1989 Karl J. Obrant et al. did an analysis of fracture trends in Malmö, Sweden, where all X-rays have been saved since the beginning of the twentieth century. They found that the yearly number of fractures in that

city had increased seven-fold between 1951 and 1985, and the incidence rate of fractures among children had doubled between 1950 and 1979. "**There are signs that there is a deterioration of the quality of the skeleton in successive generations**," wrote the authors. "**With the same or even diminished trauma, we sustain more serious and more comminuted fractures today than previously**." The increase had nothing to do with changing estrogen levels, because fracture rates had increased even more in men than in women. The daily consumption of both calcium and Vitamin D had increased during that time. But the incidence of hip fractures was higher in cities than in rural environments where, we know, there was less radiation. (8)

- Haiyu Shao et al., in 2015, looking at hours per day spent playing video games by Chinese adolescents, found that adolescents with longer video game time were more likely to have lower bone mass density in their legs, trunk, pelvis, spine, and whole body. (9)

- Anne Winther et al., studying 15- to 18-year-olds in Tromsø, Norway in 2010- 2011, found that longer screen time was associated with lower bone mass density in both boys and girls, regardless of the amount of daily physical activity, calcium intake, vitamin D, alcohol consumption, smoking habits, height or weight. (10)
- Sebastien Chastin, examining youths aged 8 to 22 in the U.S. in 2005-2006, found that screen-based sitting was associated with lower bone mass density in hips and spine. Non-screen-based sitting was not associated with lower bone mass density. (11)

- Natalie Lundin et al. found that annual incidence rates of pelvic and hip socket fractures in Sweden increased

25% from 2001 to 2016, and that increasing incidence rates were seen in all age groups. (12)

- Daniel Jerrhag et al. found that the incidence rate of forearm fractures in Sweden was 23% higher in 2010 compared with 1999, and that the increase was greater in men and women 17 to 64 years of age than in the elderly. (13)

- Michiel Herteleer et al. found that the incidence rate of pelvic and hip socket fractures in Belgium doubled between 1988 and 2006, and rose another 26% by 2018. (14)

- Neeraj M. Patel found that the annual incidence rate of fractures in children aged 6 to 18 in New York State almost quadrupled between 2006 and 2015. (15)

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