

Here are Dr. Olhoeft and Emma Gunn's testimonies from *An Electronic Silent Spring*:

Gary Olhoeft, PhD: Medtronic's DBS manual lists 16 pages of potential electromagnetic interferences. I have experienced interference with my implant's operation and programming in elevators, on large aircraft, at malls, libraries, government buildings and more. Because interferences are almost everywhere, I built a monitor to carry and warn me of potential hazards, including security and inventory control systems, Wi-Fi, smart meters, cell and radio/TV towers, wireless devices, buildings with faulty wiring, light dimmers, certain appliances and many more.

If I walk through a security system—like ones commonly found in stores, airports, government buildings or the library at the university where I teach—my DBS sometimes shuts off. I have four seconds to reset it or I shake so badly that I cannot reset it without help.

Cardiac pacemakers, insulin pumps, cochlear implants and bone stimulators can also be disturbed by RF signals. A disabled person's getting x-rayed while sitting in a metal wheelchair can be especially dangerous.

A friend with an insulin pump has to shut it off when he flies, because his pump interferes with the plane's avionics, and they interfere with his pump. This limits how far he can travel. If another friend is near several people using cell phones, her insulin pump malfunctions.

After a friend with a DBS and a pacemaker had a cochlear implant installed, his implants' signals interfered with each other. Each device functioned inappropriately, and he experienced tremendous discomfort. The surgeons who installed the devices suggested that his home's electrical system caused his trouble. They did not believe that implants could interfere with each other. They can. Unfortunately, implants are not regulated for such interference; and my friend—an MD—had to prove to his physicians that they caused his trouble.

At a meeting of people with brain stimulators, I asked if anyone's implant shuts off when they walk through security doors. All fifty people raised a hand.

But no agency studies the effects of radio-frequency signals on medical implants. Even doctors who implant devices are likely unaware of the problems.

We need to broaden public awareness about the vulnerability of people with medical implants. We need limits around "second-hand" exposure to EMR since, for example, being in a metal-walled elevator with a person using a mobile phone can be hazardous for people with implants. Stores and other places with security and Wi-Fi devices (now often hidden behind walls) should post warnings (like those FDA required of microwave oven manufacturers to alert people with pacemakers in the 1970s) that a potential hazard exists for people with implanted medical devices.

Emma Gunn, 31, Type 1 diabetic: In 2013, I got a stomach virus. After nearly 24 hours of vomiting, I went to the hospital. I was wired to several monitors and a digitalized IV drip that gave me anti-nausea medication and another drug (that I am usually on) to raise my blood pressure. For four days, vomiting and dry heaves continued. When my blood pressure went up to 166/115, the drug that raises blood pressure was stopped. I was given another drug that lowers it. I could barely talk. On Day 4, the virus began to subside. The time between vomiting got longer. I moved out of the ICU into a room that had only a wireless heart monitor. My health continued to improve, but I felt that the wireless monitor kept me from fully regaining my strength. My mother told the doctor that Dr. Magda Havas, a medical researcher, found that blood-sugar control and blood pressure are affected by radio-frequency signals used by wireless devices. She asked if he could remove the wireless heart monitor. M. Havas, "Dirty

electricity elevates blood sugar among electrically sensitive diabetics and may explain brittle diabetes," *Electromagnetic Biology and Medicine*, vol. 27, no. 2 (2008): 135–146. M. Havas et al, "Provocation study using heart rate variability shows microwave radiation from 2.4 GHz cordless phones affects autonomic nervous system," *European Journal of Oncology*, vol. 5, (2010): 273–300.

Hospital policy states that when blood-pressure meds are delivered intravenously, the patient must wear a heart monitor. This doctor realized that if I took the medication orally, he could remove the wireless monitor. My blood pressure normalized as soon as the monitor came off. I left the hospital the next day. My doctor wondered whether other patients are affected by wireless equipment.