

27 January 2012

Hennepin County Board

Dear Sirs/Madams:

This is concerning potential adverse health effects associated with exposure to radiofrequency (RF) radiation, specifically that from wireless routers. I am a public health physician who has been involved in issues related to electromagnetic fields (EMFs) for a number of years. I served as the Executive Secretary for the New York Powerline Project in the 1980s, a program of research which showed that children living in homes with elevated magnetic fields coming from powerlines suffer from an elevated risk of developing leukemia. I have edited two books on effects of EMFs, including RF radiation. I served as the co-editor of the Bioinitiative Report ([www.bioinitiative.org](http://www.bioinitiative.org)), a comprehensive review of the literature on this subject. The public health chapter from this report was subsequently published in a peer reviewed journal. I testified before the President's Cancer Panel on this subject in 2009. This is a subject which I know well, and one on which I take a public health approach that has as a fundamental principle the need to protect against risk of disease even when one does not have all the information that would be desirable.

There is clear and strong evidence that intensive use of cell phones increases the risk of brain cancer, tumors of the auditory nerve and cancer of the parotid gland, the salivary gland in the cheek by the ear. The evidence for this conclusion is detailed in many publications in the peer-reviewed scientific literature. WiFi uses similar radiofrequency radiation (1.8 to 5.0 GHz), although the intensity of exposure in the immediate environment is lower than what one gets from holding a cell phone close to your head. There is also strong evidence that leukemia rates are increased among people living near to powerful AM radio transmission towers. Because WiFi, radio transmission towers and smart meters all generate similar RF radiation, my conclusion is that if the whole body is exposed, leukemia is the major cancer of concern, while if only the head is exposed as in using a cell phone, one sees increased risk of local cancers, such as brain cancer.

The difference between a cell phone and a WiFi environment is that while the cell phone is used only intermittently a WiFi environment is continuous. In addition WiFi transmitters are indoors, where people may be very close to them. While the studies that have been done indicate that younger people are at greater risk than older people, elevation in rates of brain cancer have been found among people of all ages. To my knowledge there has been little study of health of individuals living or working in WiFi environments as compared to others who are not. However because the RF radiation is similar there is every reason to believe that the human health effects are similar to that seen with other sources of RF. Wired facilities do not generate any RF radiation. I urge you to use wired facilities rather than WiFi.

Yours sincerely,



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