

RF: Life or Death?

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After reading that exposure to high-frequency radio waves could have adverse effects on humans and the environment, my interest was piqued in the possibility of minimizing exposure to this non-ionizing radiation. I decided to take a more in depth look at ways to minimize exposure. Following my research, I predicted that different methods would each limit radiation since distance would lower the concentration, thus amount of radiation, the material with a higher level of conductivity would decrease how much radiation would get through and a cell tower with less output and a higher frequency would decrease the amount of radiation received. My experiment consisted of testing the levels of radiofrequency radiation at three different distances of three different cell towers using a RF meter placed inside wooden prisms that were all covered with different materials (except the control). The results partially supported my hypothesis in that the material with the higher level of conductivity, the Double Reflective insulation, did decrease how much radiation got through the prism and the cell tower with lower output and higher frequencies (cell tower 1) contributed to lower amounts of RF and higher reductions. However, regarding distance, the hypothesis was not supported since the 200-meter distance had an even lower amount of RF received than the 300-meter distance. I learned from my research that using certain materials on a home or building and/or living near a less potent cell tower can reduce the amount of RF radiation, yet greater distance does not equal lower concentration/amount of radiation.

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