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LETTER TO THE EDITOR: ELECTROMAGNETIC HYPERSENSITIVITY

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Electromagnetic sensitivity

In a recent letter, Marino and colleagues assert that Rubin, Cleare and Wessely “have been well funded by sources for whom general acceptance of an association between environmental electromagnetic fields (EMFs) and human disease would be financially disadvantageous” [1]. They do not specify the sources to which they refer, but the letter by Rubin to which they were responding included a declaration that Rubin’s team had been funded by the UK’s Mobile Telecommunications and Health Research (MTHR) Programme. [2] This might lead some readers erroneously to conclude that the MTHR Programme is biased in favour of the telecommunications industry.

Although the funding for the MTHR Programme comes jointly from the UK Government and industry (the latter on the principle that those who profit from a technology should contribute to the assessment of its safety), it is overseen by an independent Programme Management Committee (PMC), which I currently chair. The PMC was put in place to act as a firewall between the funding bodies and researchers, and throughout its existence has taken full responsibility for the identification of research priorities, selection of projects for funding, and overseeing the conduct of funded studies, including their publication. The members of the PMC are academics or employees of public bodies such as WHO and the UK Health Protection Agency. A minority have carried out some consultancy work for the telecommunications industry (which is openly declared), but most, like me, have no financial interest whatsoever in the industry. Further details can be found at the MTHR Programme’s website (<http://www.mthr.org.uk/index.htm>).

It should also be noted that Marino and colleagues’ interpretation of statistical significance is incorrect. They equate a p-value of 0.07 with “a 93% chance of a real correlation between EMFs and disease” [1]. A p-value of 0.07 implies a 7% probability of observing an association as strong as that seen, simply through random sampling variation, if the null hypothesis of no association were true in the (theoretically infinite) population from which the study sample was derived. Translating such a finding into the chance of there being a real correlation is a matter of judgement, and must take into account also what is known from other sources (prior probabilities). Bayesian statisticians do this formally. Conventional frequentist statisticians do it informally.

In the case of electromagnetic sensitivity, there is a strong evidence base from elsewhere indicating that, at least in the large majority of cases, symptoms are not a noxious effect of

electric or magnetic fields. This does not imply a “neurotic character flaw” any more than the placebo effects which most of us experience.

References

1. Marino AA, Carrubba S, McCarty DE. Response to letter to the editor concerning “electromagnetic hypersensitivity: evidence for a novel neurological syndrome”. *Int J Neuroscience*. Jan 9.2012 Epub ahead of print.
2. Rubin GJ, Cleare AJ, Wessely S. Letter to the editor:electromagnetic hypersensitivity. *Int J Neuroscience*. Dec 16.2011 Epub ahead of print.