# Interpreting News About RF Exposure "Discoveries"

We have all experienced the shock of turning on the news to learn that a new scientific study has shown that we have all been exposed to something that is going to give us some horrid disease. Very often, that news will capture the headlines for about a week and then disappear from sight. Why is that? There are several reasons, including the realities that sensationalist headlines capture the public's attention and that most journalists are not well-trained in the process of scientific discovery.

The reality in a field such as RF bioeffects, which has been heavily studied over a long time period, is that major discoveries that differ from what has been seen by scientists before, are unlikely. RF exposure research has a 70-year history with over 5,000 scientific studies published. The process of developing scientific knowledge includes studying a hypothesis with appropriate controls, analyzing the results with the correct statistical methods, and then writing up the methods and data in a standard scientific format so that other scientists can understand, and critique, the study.

Prior to publication of a study, a review by a small number of knowledgeable "peers" is performed to catch any errors in the study or its analysis. Following peer-review, the paper is published, after which it is subject to further review by other scientists, who can question the study in published Comments, to which the authors can then publish a Reply. Even with this amount of rigor, the peer-review process has not been infallible. Replication of a scientific study by an independent lab has become the standard by which new discoveries are accepted.

Journalists who do not understand this process of scientific development can see alarming study results and may feel a responsibility to the public to make that important new information immediately available. Some of the information that makes it to the headlines had been released prior to peer-review and would never be properly published. Some scientific journals do not have access to enough knowledgeable peers to provide a proper review. Many new discoveries have not been replicated by independent scientists.

Before you get alarmed about the latest headline, try to find out the following: Has the research that is the basis of the headline been peer-reviewed? Is it being published in a reputable scientific journal? Did any other scientists write Comments to that study, and how did the authors reply? And, most importantly, were the results replicated by other, independent scientists?