



## **Memo to the Record**

Date: January 21, 2014

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Subject: EMF and pacemakers

As a registered nurse and health educator who has worked with patients with pacemakers for many years, the question of EMF safety has consistently arisen. When a magnetic field is involved, like those found in insoles, we have repeatedly told patients that if the pacemaker was grounded, the device was probably safe. Manufacturer's information was also requested in order to ensure safety and compliance on the part of the patient.

However, over the years, we have become aware of a greater danger than a magnetic insole - and that danger is all around us, and it is difficult to completely avoid. The use of technology will not decrease; the public demands it, but it is time for the public to be made aware of the inherent dangers of EMFs on the human cell.

When pacemakers are installed, most doctors warn patients to stay away from electric, magnetic field (EMF), and high frequency (RF) sources. The rule of thumb has always been a 6-inch distance. However, we now believe that those with pacemakers should not enter EMFs because of the potential for interruption. A static magnetic field of 10 Gauss or more will cause the pacemaker to deliver a continuous sequence of stimuli of 85 beats per minute for current pacemakers or other normal low rates specific to older models. Interference is a critical issue. Possible responses include asynchronous pacing, triggered mode, and rate and program changes.