

MRI Fact Sheet

- There are over 200,000 people in the U.S. every year that have Bradycardia – a slow heart rate – where a pacemaker is needed to regulate their heart. The majority of people getting a pacemaker – 86% -- are 65 years old or older¹
- Over 6 million people aged 65 or older get an MRI scan in the United States every year²; 20% of pacemaker patients need an MRI within the first 2 years of implant³
- Why are MRI scans needed in the pacemaker patient population? There are many clinical needs like:
 - 1 in 3 adults age 65 or older fall every year and 30% of these falls lead to injuries like hip fractures and head trauma⁴
 - Many pacemaker patients have atrial fibrillation which causes a 5 times greater risk for stroke⁵; stroke affects over 8% of the population 65 years or older⁶
 - 10% of people 65 years or older have chronic low back pain each year⁷, which is best imaged with MRI⁸
- People with pacemakers historically couldn't get MRI scans because of risks posed by the MRI scanner's magnetic field's interaction with metallic components in a pacemaker. Some of these risks⁹ are:
 - Movement or dislodgement of pacemaker components or leads
 - Damage to pacemaker or heart due to energy generated by the MRI
- Today there are two companies with pacemaker systems (device and lead) that have been specifically designed, tested and proven safe through clinical trials and approved by the FDA to be safe in the MRI environment
- The same two companies are currently in clinical trials for the first MRI compatible defibrillator systems in the U.S. which will help patients with Tachycardia or a fast heart rate.
- If you need a pacemaker today, ask for an MRI compatible one

References:

¹Greenspon et al. Trends in Permanent Pacemaker Implantation in the United States From 1993 to 2009. Journal of American College of Cardiology. October 2012.

²Zhan et al. Cardiac Implantation in the U.S. from 1997-2004. Journal of General Internal Medicine. 2007.

³Ramza. SureScan Post Approval Study. Heart Rhythm Society Meeting presentation. May 2013.

⁴Centers for Disease Control and Prevention, Falls Among Older Adults 2013

⁵Atrial Fibrillation Statistics. Heart Rhythm Society

⁶Center for Disease Control Statistics 2010

⁷AAPM Facts and Figures on Pain. The American Academy of Pain Medicine

⁸ACR Appropriateness Criteria. American College of Radiology.

⁹Ferreira et al. MRI-conditional Pacemakers: Current Perspectives. Medical Devices: Evidence and Research. May 2014.