

## Magnetic Resonance Imaging with a Cardiac Implantable Electronic Device

Patients with implanted cardiac devices (pacemakers, implantable cardioverter defibrillator, or implantable cardiac monitor) must have a screening exam before having magnetic resonance imaging (MRI).

An MRI is a non-invasive medical test that uses a magnetic field and radio waves to produce images of the body’s organs and soft tissues. The magnetic field can affect metal or metallic devices in the body.

There are some potential, but small risks to having an MRI with a cardiac device.

**These risks include:**

- Malfunction or changes in the programming of the cardiac device.
- Unintended stimulation or alert deactivation.
- Premature battery depletion.

**You have 2 appointments booked for your MRI scan.**

Appointment	Date and Time	Location
<b>1. Screening Exam</b> St. Paul’s Heart Rhythm Device Clinic		St. Paul’s Hospital Heart Rhythm Device Clinic 211-1033 Davie Street Vancouver, BC  * Note this clinic is not located inside St. Paul’s Hospital
<b>2. MRI</b> St. Paul’s Hospital Radiology Department		St. Paul’s Hospital Providence Building 2nd floor, Radiology Department

**1. Screening Exam Appointment:**

You will be seen by an electrophysiologist (heart doctor who specializes in the heart’s electrical system) at the SPH Heart Rhythm Device Clinic before your MRI to check your cardiac device and talk about the risks associated with the MRI.

**2. MRI Appointment:**

At the time of your MRI, a member of the SPH Heart Rhythm Device Clinic will check your cardiac device before and after the scan. Your heart will be monitored during the MRI exam. Additional precautions will be taken for your safety during the MRI. If you feel any discomfort during the exam, please let the MRI technologist know immediately.

**After your MRI is complete, it is important for you to follow the instructions below.**

### **Follow-up Appointment**

- Continue to have your cardiac device checked on your usual follow-up schedule. This may be at the St. Paul's Hospital Device Clinic or your regular Device Clinic or doctor where you have your device checked.
- If you are not a patient of the St. Paul's Hospital Device Clinic, call your usual Device Clinic and let them know you had an MRI.
- We recommend you make an appointment to have your device checked in the next 6-12 months following your MRI. This is to make sure that the MRI has not affected your device. Some effects are not seen immediately after the scan.

### **When to Get Help**

Call your regular Device Clinic if you have either of the following:

- A warm or burning sensation at the site of your cardiac device following the MRI.
- Beeping from your cardiac device.

**Call 911** or have someone take you to the nearest emergency department if you have any of the following:

- A shock from the defibrillator (if you have an ICD) and you do not feel well afterwards.
- You experience 2 or more shocks (if you have an ICD) within a 24-hour period.
- If you pass out/faint/lose consciousness.
- Pain in your chest and/or shoulder.
- Dizziness or confusion.
- Your heart feels like it is beating quickly or racing.

