



## **MRI Considerations:**

All cochlear implant models contain a magnet located under the skin. Not only will the presence of a magnet interfere with scanning process, most images of the skull will contain a significant artifact (blurred portion) around the implant site.

***Before any imaging, it is important to remind your doctors and nurses that you have an internal cochlear implant device.***

The newest cochlear implant devices (since 2020) have magnets that are compatible with 1.5 and 3.0 Tesla strength scanners. In these devices, the magnets are designed to spin 360 degrees, so will be unaffected by the strength of the MRI scanning equipment and will not harm the internal device or surrounding tissues.

Older model devices (2010 - 2020) have magnets that are not permitted in the MRI scanner. This is because the metallic objects within the device are fixed and may rapidly move or migrate during the scan. This can injure the device, surrounding skin, or hearing nerve itself, so can be quite dangerous. For these devices, the radiologist might use a lower strength MRI in conjunction with wrapping the entire head in bandages during the procedure.

The oldest types of devices (prior to 2010) have internal magnets that must be surgically removed prior to undergoing an MRI. Removal and replacement of the magnet - without the need for explantation and subsequent re-implantation - is achieved through a short clinical procedure. Once the magnet is removed, the cochlear implant is able to withstand an MRI of 0.3, 1.5, or 3.0 Tesla.

In some older model cochlear implants, the internal magnet may not be removable. In these cases an MRI is contraindicated. It is important to determine whether your specific cochlear implant is considered MRI compatible prior to undergoing this type of procedure.

**For more information, visit your specific device manufacturer using the appropriate link below:**

[Advanced Bionics](#)

[Cochlear Corporation](#)

[Med-EI](#)

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