



**British  
Cochlear  
Implant  
Group**

**RECOMMENDED GUIDELINES ON SAFETY  
FOR COCHLEAR IMPLANT USERS  
AUTUMN 2014**

*(next update due 2016)*

***IMPORTANT***

This document has been produced by the British Cochlear Implant Group with input from the major UK suppliers of cochlear implants and members of several UK cochlear implant teams. The information contained in this document aims to provide realistic guidance to cochlear implant users to enable them to gain the maximum benefit from their implants and to minimise potential problems, but is given as general guidance, parts of which may not be applicable to all cochlear implant users.

All cochlear implant users should read and understand the instructions given by the manufacturer / supplier of their cochlear implant and should take advice from their clinician on their own particular circumstances. (Cochlear implant users may find it helpful to go through these guidelines with the staff at their cochlear implant centre.)

***BUT.....***

... do remember that most people with cochlear implants are able to lead normal lives as long as they take a few sensible precautions. Although the information in this leaflet may seem daunting, in most cases the risks are very small!





### **3. Neurostimulation**

Neurostimulation must not be used directly over the cochlear implant as it could lead to damage to the cochlea tissue or to the implant.

### **4. Electro-convulsive therapy**

Electro-convulsive therapy must never be used on a cochlear implant patient.

### **5. Transcranial magnetic stimulation (used in treatment of depression)**

This should never be used by cochlear implant users.

### **6. Electric hayfever relievers**

These should not be used by cochlear implant users.

### **7. Use of electrical and electronic medical devices**

Devices which cause electric current to flow through the head and / or neck should never be used. If you are considering using equipment that could involve electrical current passing through other parts of the body, you should check with your cochlear implant centre first.

## **Treatments that can SOMETIMES be carried out on people with cochlear implants**

### **1. MRI**

MRI must be approached with **extreme caution** and other imaging techniques should **always** be considered first. A person with a cochlear implant must **never** have an MRI scan without first seeking the advice of the medically responsible person from their cochlear implant team, who should also contact the implant manufacturer. An MRI machine has the potential to **damage the implant**, or cause potentially **harmful effects** due to the magnetic and electrical properties of the internal implant (the effects cannot be avoided by simply taking off the speech processor). For these reasons, a person with a cochlear implant should also not be near an MRI machine, whether it is in use or not.

Nuclear Magnetic Resonance (NMR) machines, which are sometimes used in research facilities and universities, are similar to MRI machines, so also should not be approached.

Some cochlear implants can be compatible with certain types of MRI procedure. Others can be made temporarily compatible by a minor surgical procedure. Some may not be compatible. There is a time period after cochlear implant surgery during which MRI scans cannot be carried out at all.

Contact the Surgical Team if there are any doubts, or ask the MRI department to contact the surgical team on your behalf.

### **2. Ultrasound**

The use of ultrasonic diagnostic equipment and ultrasonic tooth cleaners is not thought to pose any significant risk of damage to the implant but ultrasound should not be applied directly over the site of the

implant and you should remove the external parts of the implant when ultrasound is in use.

### **3. TENS machines (as used for pain relief)**

TENS machines should not be used on the head. For treatment of neck problems and before embarking on any course of physiotherapy electrotherapeutic treatment you should refer to the Implant Centre before proceeding.

### **4. X rays**

X rays can be undertaken but the speech processor should be switched off and kept well away from all X ray equipment.

### **5. Gamma cameras**

External equipment must be removed.

### **6. Electrolysis**

Electrolysis must not be carried out within 1cm of any part of the cochlear implant. (Note that the eyebrows could possibly be close to some of the internal parts). The external equipment should be removed during the process.

### **7. Devices for electronic pain therapy (including pain relief pens)**

These devices may cause damage to the implant if they are used on the head or neck. They may be used below the neck.

### **8. Radiotherapy (eg cobalt units or linear accelerators)**

The cochlear implant is only at risk of failure if it is exposed to the direct beam. Scattered radiation is unlikely to cause any damage. As a precaution the external equipment should be removed and kept outside the treatment room. It is advisable to leave the equipment off for 2 hours after the treatment. The Cochlear Implant team should be informed of any cochlear implant users undergoing radiotherapy.

### **9. Ultrasound diathermy**

This is acceptable below the head and neck.

### **10. Dental treatments**

Dental probes, i.e. electrical pulp testers, can be used on people with cochlear implants. See section above for information about ultrasonic tooth cleaners.

### **11. Electro-acupuncture**

Monopolar electro-acupuncture must not be used on the recipient's head or neck (note that the indifferent electrode may be held in the recipient's hand). Bipolar electro-acupuncture may be used, but is not advisable on the head.

### **12. Face lifts and hair transplants**

Check with your surgeon to make sure that the incision will not affect your cochlear implant.

## **Treatments that CAN be carried out on people with cochlear implants**

Treatments that are known to be safe for cochlear implant users include:



