BONEBRIDGE™ bone conduction implant – information for patients

This leaflet explains more about having a bone conduction implant. It explains the benefits, risks and alternatives to the procedure as well as what you can expect when you come to hospital.

If you have any questions or concerns, please do not hesitate to ask one of our surgeons or audiologists who are caring for you.

What is a bone conduction implant?
A bone conduction implant is a medical aid implanted in the mastoid bone behind the ear which mechanically vibrates the inner ear. This vibration mimics the action of sound waves passing down the ear canal, through the ear drum, the small bones in the middle ear and then the inner ear. This vibration bypasses any abnormality in the ear canal or middle ear or the need for a conventional hearing aid if it cannot be worn.

The bone conduction implant system has two components; an internal part and an external part.

The external part is called the audio processor. It contains the microphone, battery, a digital signal processor and a magnet. It is held in place to the head by the magnetic force between the external audio processor and the internal implant. The audio processor picks up sound from the environment and turns them into radio signals that are transmitted across the skin to the internal part.

The internal part is implanted during a surgical procedure. It consists of an internal receiver coil, with a magnet which holds the audio processor over the implant, an electronics package, a flexible transition and a Bone Conduction Floating Mass Transducer™ (BC-FMT™). The BC-FMT is an electromagnetic that mechanically vibrates the skull, and the cochlear (inner ear).

Note: This figure is provided by MED-EL, further images are available at: http://www.medel.com
Who is it for?
This device is for patients with mild to moderate conductive hearing loss who can’t wear hearing aids, for example patients with discharging ears or no ear canals. Their bone conduction thresholds must be no worse than 45dB (decibels), which is the same for those patients having a bone anchored hearing aids BAHA.

However the Bonebridge has the advantage that it isn’t fixed with an implant that goes through the skin and so will be particularly appropriate for patients who have medical conditions that may result in poor fixation or soft tissue healing, for example patients with a previously failed BAHA implant, diabetes, after radiotherapy, a history of keloid scarring, hygiene issues, skin conditions, etc.

What are benefits – why should I have a bone conduction implant?
Bone conduction implants provide access to environmental sounds and speech for people who cannot wear a conventional hearing aid.

What are the risks?
This procedure is carried out under a general anaesthetic. As with any major operation there is a risk of you having a medical complication. All potential risks will be explained and discussed with you when the consultant asks you to sign the consent form before the operation.

If you are having the operation under general anaesthetic, you may wish to read our leaflet, Having an anaesthetic for more information.

There is also a small chance that it may not be possible to implant the device due to lack of space, however you will have a scan before the surgery to see whether there is space for the device.

Are there any other alternatives?
There are several alternatives. Of course you may decide to do nothing if your hearing loss doesn’t inconvenience you too much. If you are able to, you could continue to wear a conventional hearing aid.

You may also be considered for a Bone Anchored Hearing Aid which gives a very similar degree of hearing benefit and has less extensive surgery. The disadvantage is the small metal abutment which passes through the skin to anchor the bone anchored hearing aid to the bone. We are recommending the Bonebridge implant because we think you may have difficulty with the skin around the abutment. Please ask us if you need more information.

Asking for your consent
We want to involve you in all the decisions about your care and treatment. If you decide to go ahead, you will be asked to sign a consent form. This confirms that you agree to have the procedure and understand what it involves. You should receive the leaflet, Helping you decide: our consent policy, which gives you more information. If you do not, please ask us for one.
What happens during the operation and follow-up appointments?
The surgery is done under a general anaesthetic and takes about an hour. There will be an
incision behind the ear and the mastoid bone is opened to fit the implant. The implant is secured
to the bone with two small screws and the wound is neatly closed. The follow-up appointments
will be to program the device, show you how to use it and test how well you can hear with it.

Will I feel any pain?
There may be some pain but this can be controlled with painkillers provided by the hospital if
necessary.

What happens after the procedure?
You will go home either on the same day as the operation or the next day.

What do I need to do after I go home?
The stitches should dissolve by themselves but please don’t wash your hair or get the wound
wet until after it has been checked here or by your local doctor. You will be able to go back to
work once the wound has healed and will be prescribed paracetamol for pain relief. You might
feel tired for a few days after the operation while you recover from the anaesthetic.

Will I have a follow-up appointment?
You will be sent some follow-up appointments which will be at St Thomas’ Hospital. If you don’t
receive them, then please contact us.

Your device will be activated about six weeks after the operation. You will have at least two
more appointments for fine-tuning and testing of the device. You may also need to attend
review appointments every year.

Contact us
If you have any questions or concerns about Bonebridge please contact the auditory
implant team between 9am – 5pm Monday to Friday using the contact details below.

If you have concerns after the operation, outside of office hours then please call the
hospital reception on 020 7188 7188 and ask to speak to the ENT on call.

• Reception (T) 020 7188 6245
• Administration (T) 020 7188 2197
• Fax (F) 020 7188 2192
• For an appointment e-mail AiAdmin@gstt.nhs.uk
• To request for repairs and spares e-mail: auditoryimplants@gstt.nhs.uk
• Firstname.lastname@gstt.nhs.uk (to email individual team members)
Pharmacy Medicines Helpline
If you have any questions or concerns about your medicines, please speak to the staff caring for you or call our helpline.
t: 020 7188 8748 9am to 5pm, Monday to Friday

Patient Advice and Liaison Service (PALS)
To make comments or raise concerns about the Trust’s services, please contact PALS. Ask a member of staff to direct you to the PALS office or:
e: 020 7188 8801 at St Thomas’ t: 020 7188 8803 at Guy’s e: pals@gstt.nhs.uk

Knowledge & Information Centre (KIC)
For more information about health conditions, support groups and local services, or to search the internet and send emails, please visit the KIC on the Ground Floor, North Wing, St Thomas’ Hospital.
t: 020 7188 3416

Language support services
If you need an interpreter or information about your care in a different language or format, please get in touch using the following contact details.
t: 020 7188 8815 fax: 020 7188 5953

NHS Direct
Offers health information and advice from specially trained nurses over the phone 24 hours a day.
t: 0845 4647 w: www.nhsdirect.nhs.uk

NHS Choices
Provides online information and guidance on all aspects of health and healthcare, to help you make choices about your health.
w: www.nhs.uk

Become a member of your local hospitals, and help shape our future
Membership is free and it is completely up to you how much you get involved. To become a member of our Foundation Trust, you need to be 18 years of age or over, live in Lambeth, Southwark, Lewisham, Wandsworth or Westminster or have been a patient at either hospital in the last five years. To join: 
t: 0848 143 4017 e: members@gstt.nhs.uk w: www.guysandstthomas.nhs.uk