



# Baha<sup>®</sup> Candidate Guide

Hear now. And always



Cochlear<sup>™</sup>



# Your personal introduction to Baha<sup>®</sup>

**When you have a hearing loss it is important to find a solution that perfectly matches your needs. And certain conditions – such as conductive hearing loss, mixed hearing loss and single-sided sensorineural deafness – may be best treated with a Baha system. This guide explains the principles of this unique technology, as well as the procedures involved in fitting and using it.**

## **What makes Baha unique?**

We hear sound naturally in two ways: through air conduction and bone conduction. As the name suggests, air conduction hearing aids rely on air to carry the sound from the outer ear via the ear canal to the middle ear, and then vibrations of the middle ear bones carry the sound to the inner ear. If the outer or middle ear is blocked or damaged, the sound cannot reach its destination. In this case, the most efficient solution is to reroute the sound completely with a Baha.

A Baha sound processor captures the sound around you and directs it through a titanium implant, where your body's natural ability to conduct sound via your skull bone directs the vibrations to your inner ear.

If you are completely deaf in one ear, the Baha will send the sound signals via bone conduction from the deaf side to the functioning cochlea on the opposite side. In this way, you will regain 360 degree sound awareness.

With a Baha you may be able to enjoy all sorts of sounds that you may previously have had difficulty hearing – from birds chirping in the garden and music on the radio to people chatting happily at the dinner table.

# Who is a Baha<sup>®</sup> candidate?

Any of the following types of hearing loss are ideal for treatment with a Baha system.



## **Conductive hearing loss** (outer or middle ear problems)

In cases where the outer or middle ear is blocked, conventional hearing aids increase the amplification until the sound is forced through the blockage. But this is just like turning your stereo up too loud; the higher the volume, the more distorted and uncomfortable the sound becomes.

Rather than using power to penetrate the damaged area, the Baha re-routes the signal directly through the skull bone to the inner ear. This helps to avoid distortion and feedback, as well as discomfort from large, tight-fitting ear molds.



## **Mixed hearing losses** (both middle and inner ear problems)

This condition involves complications both in the outer or middle ear and the inner ear. By conducting the sound through the skull bone, the Baha bypasses any outer/middle-ear problems, so it only has to address the inner-ear component of the hearing loss.

With direct access to the cochlea, the Baha can apply just the right amount of amplification to fit your listening needs. The outcome is less distortion and feedback, and greater listening comfort.



## **Single-sided sensorineural deafness** (total deafness in one ear)

This condition makes even the simplest everyday situations very challenging. With only half the input it becomes difficult to locate sounds, and even harder to hear and understand speech when it is coming from the deaf side.

Recent studies\* have demonstrated that Baha is the most universally-effective solution for SSD. Baha transfers sound directly to the healthy cochlea, making it possible to hear sounds from both sides.

\* See last page for study references



# Principles of Baha<sup>®</sup>

**The Baha system consists of a high-performance sound processor, an abutment and a small titanium implant which is implanted in the bone behind your ear.**

The sound processor picks up the sound around you, transfers it to the abutment and the implant, which sends sound directly to the inner ear through the skull bone, completely bypassing the outer and middle ear.

If you have a conductive or mixed hearing loss in both ears, you may receive implants on both sides to make it easier to locate sounds and improve your hearing in noise. If you receive an implant on one side, the side chosen will be the one that you feel provides the greatest benefit. In cases of single-sided deafness, the implant will always be placed on the deaf side.

The Baha system has three components:



## **A sound processor**

Picks up sound and transforms it to vibrations.



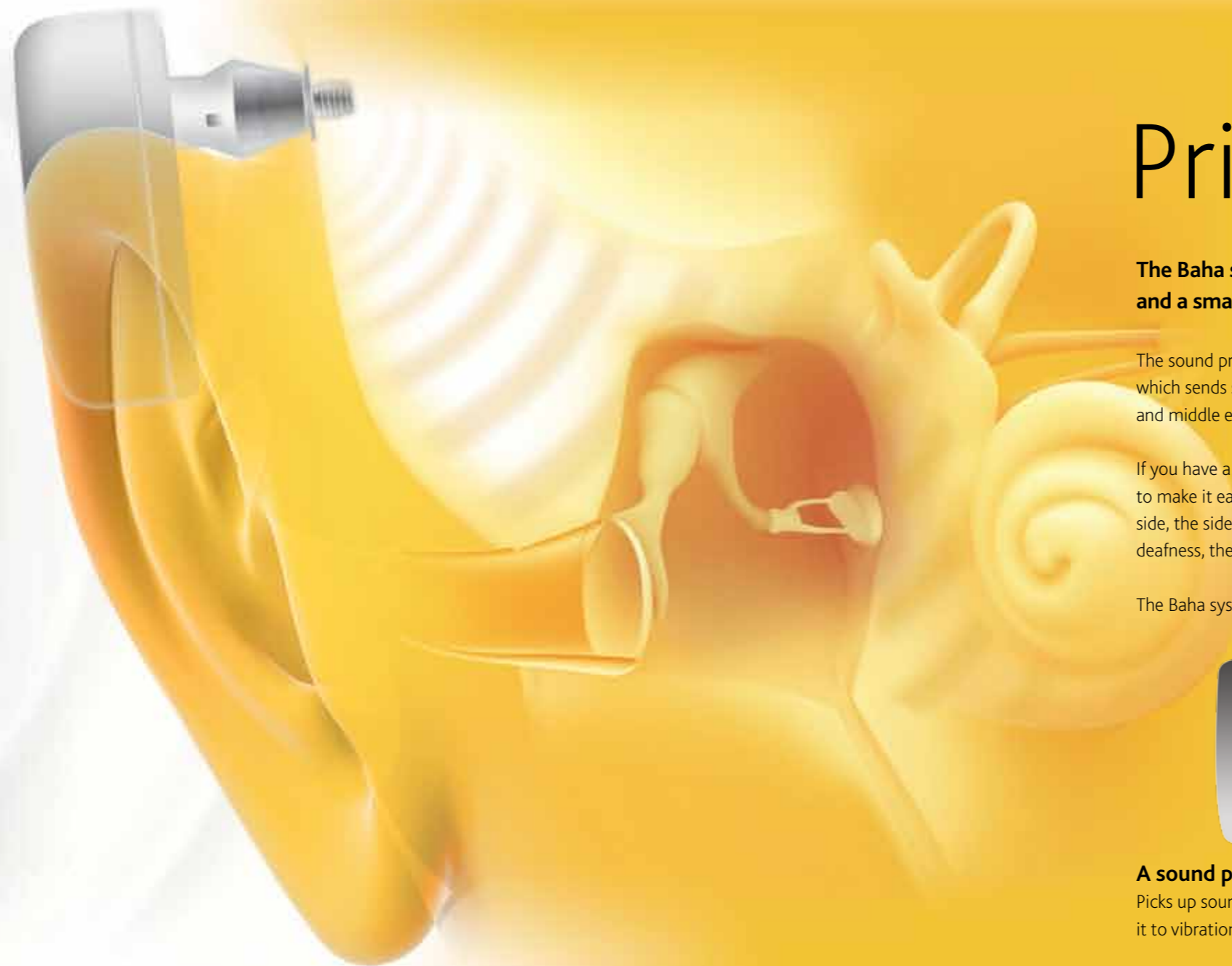
## **A connecting abutment**

The part of the implant that protrudes through the skin is called an abutment. This transfers the amplified sound vibrations from the Baha sound processor to the implant.



## **A titanium implant**

Transfers the sound vibrations directly to the cochlea via bone conduction.



# What people say about Baha®...



"I can hear more sound with the Baha which has helped a lot with my piano playing. I can now hear soft sounds and lower frequency sounds much better and the quality is far superior to the bone conduction hearing aid I was wearing."

Daniel T.



"Music and singing are very important to me. I started when I was 6 years old and now jazz is my favorite!"

Arnold B.



"What a change - wow! The quality of sound produced by this device is clear and useful to me even in noisy environments. The Baha is so easy to use I often forget it is attached."

Doug M.

"It is not an exaggeration to say that my use of Baha over the past few months has given me a glimpse of what my life could have been like."

Jennifer A.



"Listening used to take a lot of energy. With the Baha, group conversations are so much easier. I can hear where the sound is coming from and don't look at the wrong person any more. I can also hear all the little things in life, that others often take for granted."

Vreni C.



"After testing the Baha, I immediately decided to go for it. Once the Baha was fitted, I noticed an instant improvement in my hearing. I also noticed a real difference when shopping. Despite the music and lots of other sounds, I can hear everything effortlessly. I am so happy with a Baha - it has improved my quality of life."

Ans van V.



# How to get a Baha<sup>®</sup> system

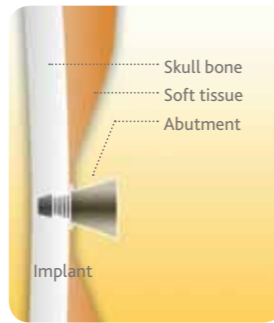
1

## Assessment

The first step to getting a Baha system is to book a consultation with a surgeon and an audiologist, both trained in Baha. Your hearing care professional can help you arrange this. During the consultation, your surgeon will confirm that you are a good candidate for Baha, outline the procedure and answer any questions you may have. At this stage you will have the opportunity to try Baha amplification using an external test band or rod before proceeding with surgery.

2

## Implant



The implant procedure is relatively minor. Under either local or general anesthesia, your surgeon will prepare a small area behind your ear, removing some of the hair follicles. The exact placement of your implant will vary depending upon your physical characteristics. A Baha titanium implant with an abutment will be inserted in the center of this region. The area closest to the abutment will remain hair free.

3

## Dressing

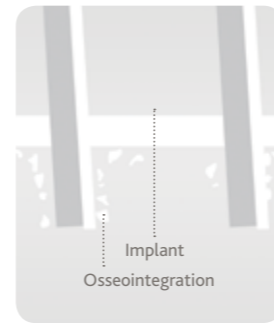


After surgery you will need to wear a dressing, which should be changed regularly. The stitches will be removed after approximately 10–14 days, provided that the area has healed. The area around the abutment could feel numb – a condition that may or may not be temporary.

Once the dressing has been removed it is important to keep the abutment area clean. You will receive a cleaning brush designed specifically for this purpose. This brush accompanies the Baha Aftercare brochure which contains easy-to-follow instructions for use and care of your Baha system.

4

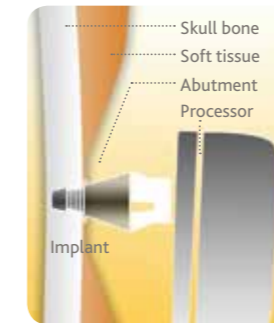
## Osseointegration



After surgery the implant will need time to merge or osseointegrate with the bone before you can attach the sound processor. Your surgeon will be able to give you an indication of how long you will have to wait before being able to receive your sound processor.

5

## Fitting



After the implant has had time to merge with the bone, it will be time to visit your hearing care professional for the next step: getting your Baha sound processor fitted.

During the fitting, your audiologist will adjust the sound settings to suit your personal requirements. You will also be able to discuss how the Baha works in various situations, and how to keep it in prime condition. Following a few simple guidelines will keep your Baha system functioning perfectly.

# Tailor-made solutions

There are three different sound processors to meet your listening needs. Your hearing care professional will recommend the one that's best for you.



## Cochlear™ Baha® BP100

A complete gem

Cochlear's newest innovation in bone conduction sound processors is based on the latest technology including advanced digital signal processing. Even when it's noisy, the new Baha BP100 may help you hear more than you do today with other direct bone conduction devices. GORE-TEX® membranes over the microphone ports, a silicon seal and rubber lining are designed to help keep water, moisture and dust out so you can benefit from amplification all day long – even in challenging environments.



## Baha Intenso™

Power and discretion

For hearing losses where more power is required, Baha Intenso™ is a logical choice. It is discreet, yet powerful. The advanced digital technology reduces the risk of whistling and provides more of the interesting details of sound, together with greater listening comfort.



## Baha® Cordelle II\*

Body worn super power

For more substantial hearing losses, the body worn Baha Cordelle II is the strongest member of the Baha family. With this device you'll hear more than ever, with less feedback and distortion.

Cochlear Baha BP100 available in soft (matte) black, piano (gloss) black, chestnut brown, champagne blonde, slate grey, glacier (gloss) white.

Baha Intenso available in black, brown, blonde and silver-grey. Baha Cordelle II available in black, beige and grey.

**NOTE:** Not all products are approved in all markets. Contact your local Cochlear representative for information.

\* Not to scale

## Accessories to match

### AUDIO ADAPTOR

To hear with direct input from electronic equipment such as stereos, TVs, and MP3 players.



### MICROLINK FM-RECEIVER

To further improve speech understanding in noise. Contact: [www.phonak.com](http://www.phonak.com)



### TELECOIL UNIT

To hear more clearly over the phone, the Telecoil unit sends the signal directly to a Baha.



Accessory images are not actual size. Please contact your hearing care professional for specific information on which accessories fit your sound processor.

# Caring for a Baha<sup>®</sup>

## Daily routines

To avoid complications it is essential to keep the skin around the abutment clean. For the first few weeks, use a strip of a non-alcohol wipe to clean the area; then you can begin gently brushing the area with the cleaning brush that comes with your Baha. You should also clean inside the abutment to avoid any build-up of debris. After cleaning, carefully dry the area.

If you follow this routine, living with your Baha will be easy. Just remember to visit your hearing care professional regularly to get both the abutment area and the sound processor checked.



## Handling the Baha

### ATTACH IT AND GO!

Your Baha sound processor is designed to snap onto the abutment. Simply attach it at a slight angle, tilt and push it into place, taking care to keep your hair out of the way. To take it off again, place one finger under the device and gently tilt it off.

### KEEPING YOUR BAHA SOUND PROCESSOR POWERED UP

You can usually tell when a new battery is needed in your sound processor, as the sound quality will diminish (the Baha Intenso has warning beeps that will alert you when the battery needs changing). Open the battery door, replace the battery, and click it back into the closed position.

### PROTECTING YOUR BAHA

The Baha sound processor is not waterproof and contains microelectronic components, therefore it should be removed before taking a shower and when swimming. It is also advisable to avoid exposure to high temperatures or rough handling. Do not drop your Baha sound processor as that may damage it.





# What people ask about Baha<sup>®</sup>

## **Can I try a Baha sound processor before making up my mind?**

You most certainly can! It can be connected to a test band, test rod or Baha Softband, that allows you to try the sound processor in different environments such as at home, at work etc.

## **Can I wear a Baha all the time?**

You can wear it for all normal activities, but you should take off the sound processor before going to sleep, taking showers or doing water sports. You may need to wear special protection for contact sports.

## **When can I go back to work after surgery?**

You should be able to go home the same day. Most people prefer to take an extra day off work before resuming their normal activities. However, in most cases you may return to work on the advice of your surgeon.

## **Do children with a Baha need special care?**

Children using Baha can be taught to clean the abutment just as they are taught to clean their teeth. You will know when they are ready to take responsibility for their own daily routine. In the US only, children aged five and older are cleared by the FDA for implantation, but younger children can use a Baha with a Softband.

## **Is a Baha compatible with mobile phones?**

Yes, all Baha sound processors can be used with GSM or other mobile phones. But you should never hold the phone against the sound processor itself, since this could cause feedback problems. A telecoil unit can be used with any Baha to improve the sound quality of an ordinary phone that is fitted with a loop or a coil.

## **How many people have received a Baha to date?**

Many thousands of people have been treated so far – some of whom have been wearing Baha sound processors since they were introduced in 1977. Over the last 10 years, Baha has become a treatment of choice for thousands of hearing impaired people worldwide, and the numbers of Baha users are increasing rapidly.





## The Cochlear Promise

As a global leader in hearing solutions, Cochlear is dedicated to bringing the gift of sound to people all over the world. With our hearing systems, Cochlear has reconnected thousands of people to their families, friends and communities in more than 70 countries.

For patients receiving any Cochlear hearing system, our commitment is that for the rest of your life we will be here to support you.

Hear now. And always

As your patient's partner in hearing for life, Cochlear believes it is important to convey not only the benefits, but also the potential risks associated with a Baha<sup>®</sup> procedure.

Not everyone with hearing loss is a candidate for a Baha. Baha is contraindicated in patients with inadequate bone quality or quantity to provide stability and support for the implant, or in patients who will be unable to maintain and clean the skin around the abutment. In the U.S., use of the implanted fixture is also contraindicated in children under age 5 years.

All surgical procedures include an element of risk, and it is impossible to guarantee success. The device may fail to osseointegrate for a number of reasons, including physiological and surgical issues as well as traumatic impact to the implant site. On rare occasions the skin around the abutment may become inflamed from a mild infection or the skin may grow back towards its original thickness. For complete information regarding the risks and benefits of a Baha procedure, please refer to the instructions for use for the Baha implant available at [www.cochlearamericas.com/Bahaindications](http://www.cochlearamericas.com/Bahaindications)

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