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Path to Ponto: Tips for Incorporating Bone Anchored Hearing Systems into Private Practice Audiology Clinics

Dianna Tingle Gould, AuD, CCC-A
Clinical Territory Manager - Southeast



Introduction

Dianna Tingle Gould serves as the Clinical Territory Manager for Oticon Medical. She specializes in supporting private practice development with an emphasis on supporting the introduction of Bone Anchored Hearing Systems into the private practice framework

Date

Agenda

1. What is a Bone Anchored Hearing System
2. Candidacy
3. The Ponto Difference
4. Direct vs. Skin Transmission
5. Minimally Invasive Procedures
6. How would you include it in your practice?
7. Why would you include this in your practice?

Learner Outcomes

1. After this course, participants will be able to determine which sound processor will be the most appropriate choice for their patient.
2. After this course, participants will be able to explain the reasons why an individual can benefit from direct sound transmission versus skin transmission.
3. After this course, participants will be able to counsel on the differences between traditional hearing aids and Bone Anchored Hearing Systems.

Financial Disclosure

- **Financial:** Dianna Tingle Gould is a paid employee of Oticon Medical, LLC.
- **Non-Financial:** Presenter has no non-financial relationships to disclose
- This presentation focuses on Oticon Medical Products and Services.
- This course has been approved for **0.10** CEUs by the following organizations:
 - American Academy of Audiology (AAA)*
 - American Speech, Language, and Hearing Association (ASHA)
- *AAA and ASHA CEU approval does not imply endorsement of course content, specific products, or clinical procedures



Bone Anchored Hearing System

Dianna Tingle Gould, Au.D.



So Many Names

- BAHS – bone anchored hearing system
- BAHA – bone anchored hearing aid
- BAHI – bone anchored hearing implant
- BAHD – bone anchored hearing device
- OBCD – osseointegrated bone conduction device
- BCHI – bone conduction hearing implant

Brands

- Most common acronyms: BAHA and BAHS
- Kleenex & Puffs
- BAHA: Made by Cochlear
- BAHS: Ponto made by Oticon Medical



- These are IMPORTANT distinctions to understand when filling out order forms and insurance paperwork

Why do we call our processor the Ponto?



Ponto (Latin) = Bridge

Making life sound better

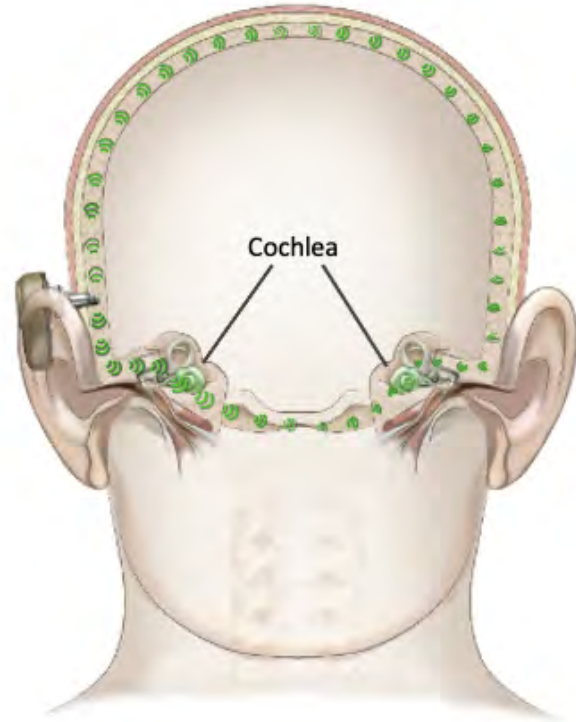
- At Oticon Medical, we have **been making life sound better since 2009.**

Every day, more patients take the path the life-changing difference of the Ponto System.

- **2009** Ponto System launched
- **2015** MIPS: World's first minimally invasive bone anchored procedure
- **2016** Ponto 3 SuperPower: World's first abutment-level SuperPower sound processor
- **2022** Ponto 5 family Softband 5 and MONO: Our best Ponto System, yet



How does a bone-anchored hearing system work?

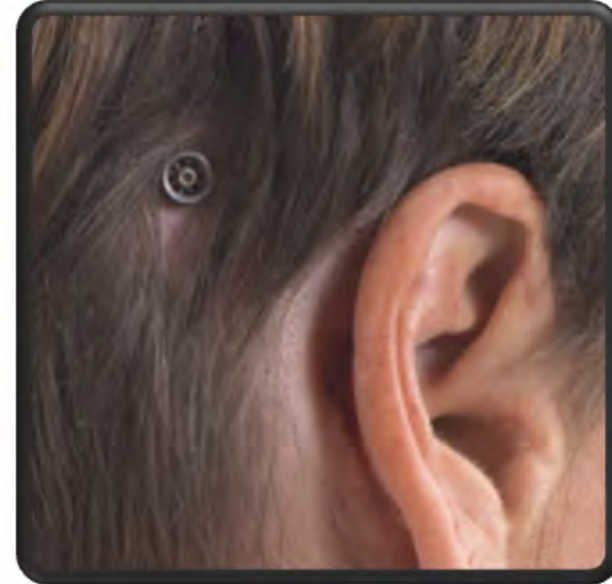
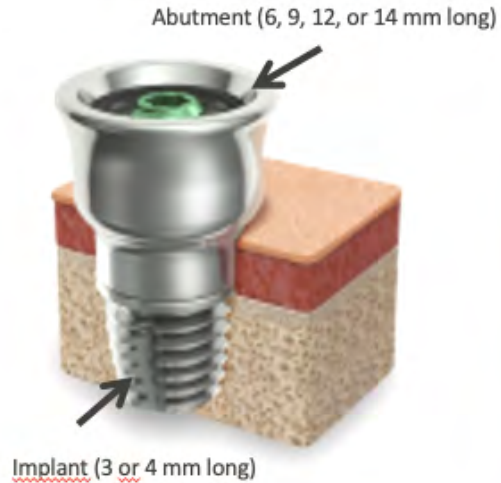


Sounds are converted to vibrations, which are transmitted directly to both inner ears.

The Ponto Implant System



Direct Bone Conduction



Candidacy



BAHS Candidacy Categories

Unilateral Conductive/Mixed Hearing

- ≤ 65 dBHL BC PTA .5K, 1K, 2K, and 3K Hz

Bilateral Conductive/ Mixed

- Less than 10 dB PTA .5k, 1K, 2K, and 3K Hz difference between ears.
- Less than 15 dB difference at any one frequency

Single-Sided Deafness

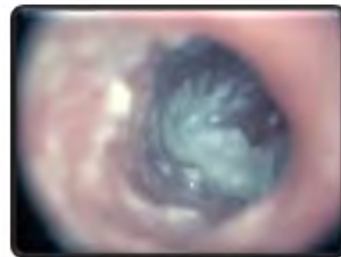
- ≤ 20 dBHL AC PTA .5K, 1K, 2K, and 3K Hz in the better ear

All surgical candidates must be 5 years and older

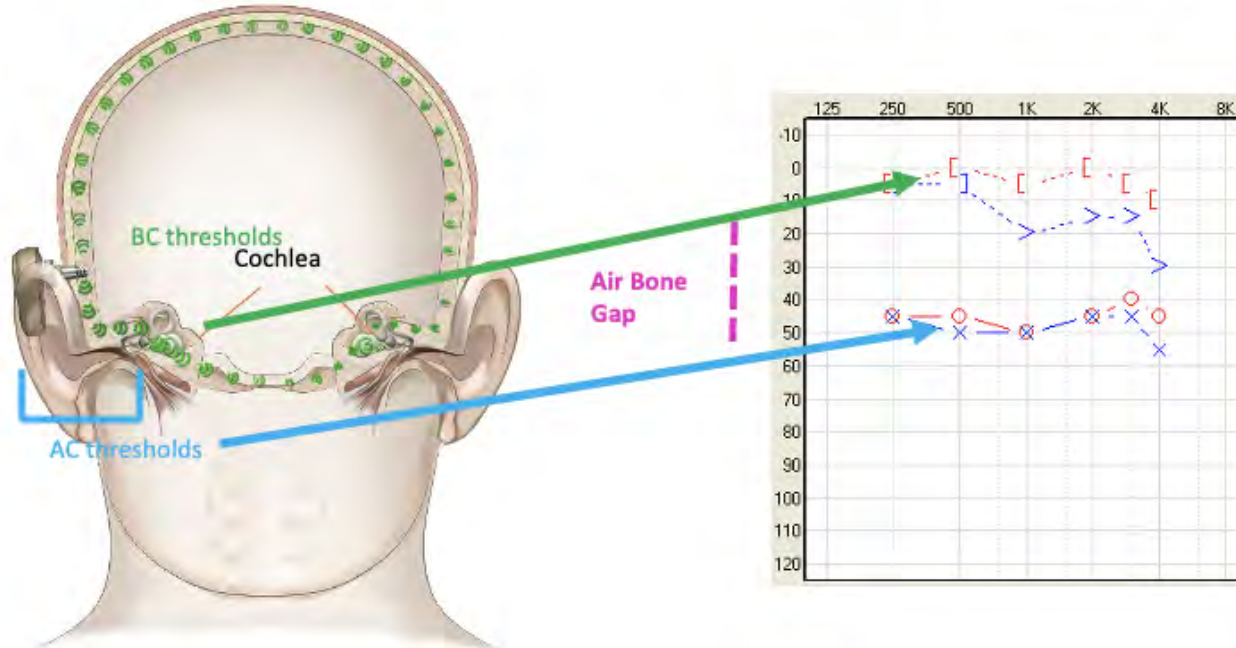
Patients with Conductive and Mixed Hearing Loss

Unilateral or bilateral typical diagnosis:

- Atresia/Microtia
- Chronic otitis media
- Cholesteatoma
- Middle ear dysfunction/disease
- External otitis
- Syndromes (e.g. Treacher Collins, Goldenhar, CHARGE...)

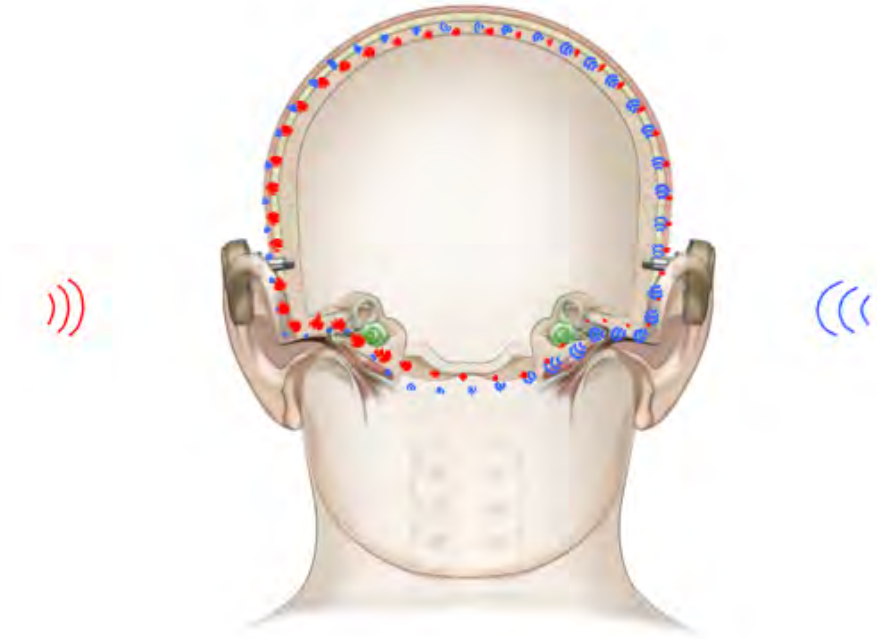


Conductive and Mixed Hearing Loss



Binaural Hearing with BAHS

Binaural benefit from bilateral fitting is possible if BC thresholds are symmetrical



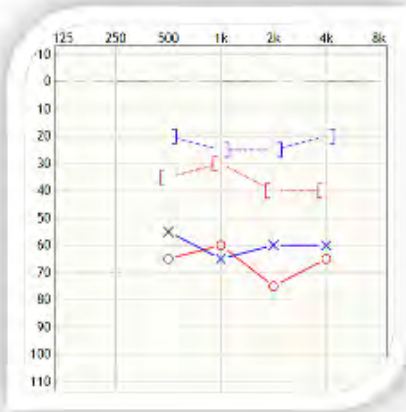
Bilateral Fitting- Making a Decision

Bilateral
Hearing loss

Look at
Masked BC

Symmetrical
BC?

Fit
Bilaterally=True
Binaural Effect



- PTA difference of less than 10 dB between ears
- Less than 15 dB difference at any one frequency

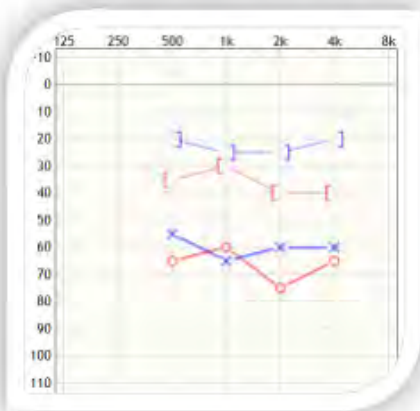
Unilateral Fitting- Making a Decision

Bilateral
Conductive/Mixed

Look at Masked BC

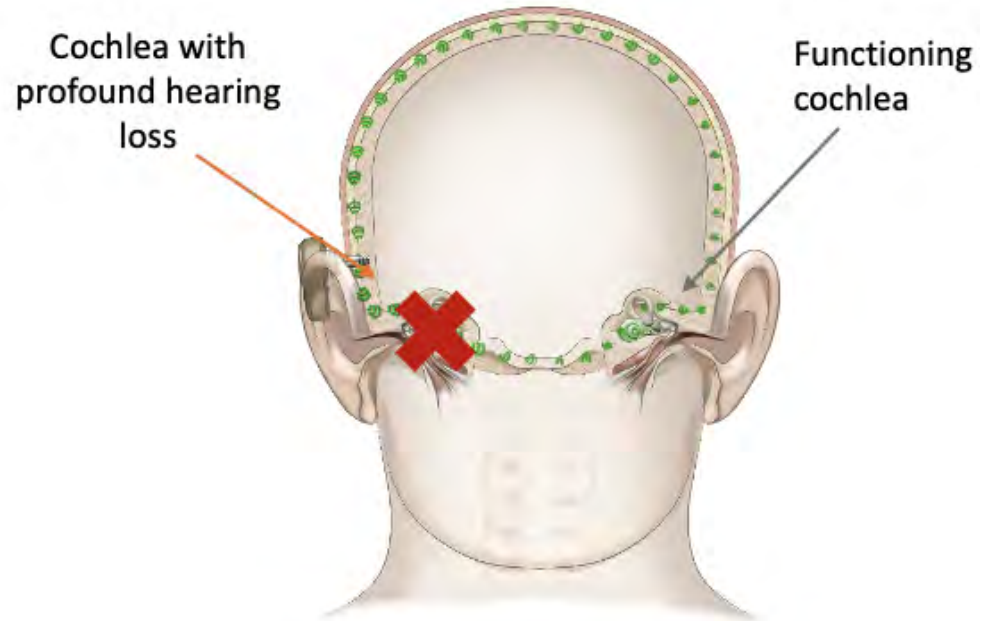
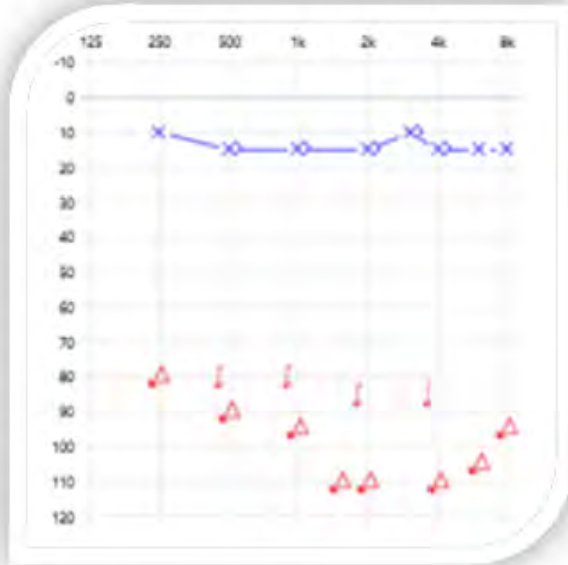
Asymmetric BC

Fit BAHS to the
side with best BC



If BAHS is fit on
poorer BC side, it will
function like a CROS
device

Single-Sided Deafness (SSD) (Unilateral Sensorineural HL)

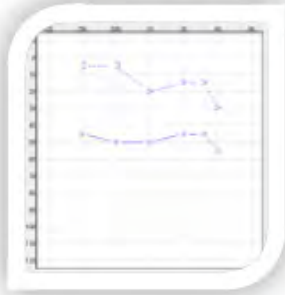


Traditional Hearing Aids vs. Bone Anchored Hearing System



Studies suggest that candidates with an average air-bone gap larger than 30dB experience significant advantages using a bone-anchored solution compared to using an air conduction hearing aid.*

Traditional Hearing Aids vs. Bone Anchored Hearing System



Traditional HA

- High gain
- Likely problems with feedback
- Tight earmold



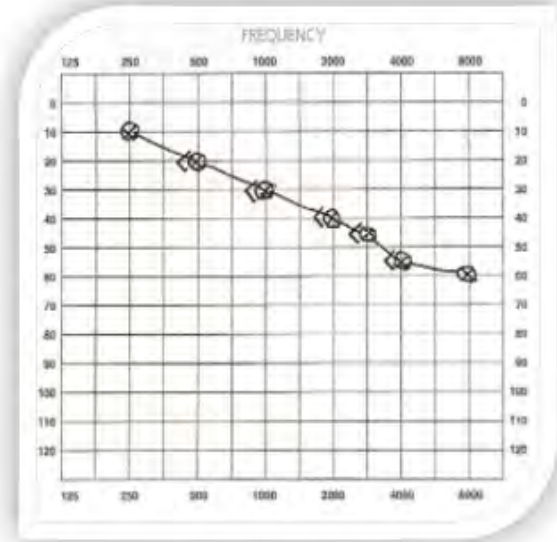
Bone anchored device

- Low gain
- Better sound quality
- Ear canal is open

Candidates with Other Medical Indications

Physical constraints for a standard hearing aid

- Underlying skin condition
- Inflammation
- Ear drainage
- Reaction to earmolds
- Narrow ear canal anatomy



Fluctuating Hearing Loss

Softband

- Non-surgical option with children with secondary hearing loss due to abnormal middle ear function.

Benefits:

- No risk of over amplification
- Ear canal remains open – small canal, wax, drainage does not affect function
- Consistent stable access to sound.



Who is NOT a Candidate?

- Individuals with **poor hygiene** who may not be able to care for the abutment site
- Individuals who have **poor bone quality** that will not support the implant.
 - i.e. the bone is too thin after receiving radiation
- Individuals who have a **skin condition** that will reduce their ability to heal following surgery
- They are under **5 years of age**

Available Bone Conduction Hearing Solutions

Direct Sound Transmission
Vibrations directly to the bone

Skin Transmission
Vibrations through the skin

Active transcutaneous
Transducer in implant

Percutaneous
Transducer in external
sound processor

Non-surgical solutions

Passive transcutaneous
Implanted magnet





What Makes Ponto Different



QUESTION

Have you fit an Oticon hearing aid in the past 5 years?



QUESTION

Have you ever fit a Ponto device?

Oticon vs. Oticon Medical

- Different companies
- Same signal processing
- Familiar software

Ponto 5

WELCOME

SELECTION

FITTING

END FITTING

Ponto 5

P1 P2

FITTING

Fine-tuning

Feedback Analyzer

BC In-situ Audiometry

OpenSound Navigator

Program Manager

MORE TOOLS

Automatics

Verification

Data Logging

VC

Reserve gain

5 dB

P1: GENERAL, NAL-NL1 BC

Gain, head Target and simulated

ANSI S3.5 (CIPA Stationary)

P1: GENERAL, NAL-NL1 BC

Gain, head Target and simulated

ANSI S3.5 (CIPA Stationary)

VC

Reserve gain

10 dB

GAIN CONTROLS

3 16

125	250	500	625	750	1k	1.1	1.25	1.5	1.75	2k	3k	4k	5k	6k	8k	All
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Rel. MFO
6	16	26	32	37	41	38	28	21	20	24	28	34	28	31	25	Loud
13	23	33	42	44	41	41	39	32	31	35	39	41	35	35	29	Moderate
19	29	39	49	44	41	41	44	43	42	46	45	46	41	39	34	Soft

CR

All	125	250	500	625	750	1k	1.1	1.25	1.5	1.75	2k	3k	4k	5k	6k	8k
Rel. MFO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Loud	9	19	27	27	30	34	31	25	19	15	17	18	24	18	20	13
Moderate	12	22	31	34	32	41	39	33	27	23	26	27	28	22	21	14
Soft	16	26	35	41	44	41	41	41	36	32	36	35	31	25	22	15

RemoteCare

SoundStudio

Ponto Fitting Ranges

Average BC threshold better than or equal to:

45

dB HL



Ponto 5 Mini

The world's smallest bone anchored sound processor. Truly wireless and with state-of-the-art technology

65

dB HL



**Ponto 5
SuperPower**

The world's most powerful abutment-level sound processor

OpenSound Navigator™

Ponto 5 SuperPower's signal processing help system OpenSound Navigator delivers **360° sound with selective noise reduction** in complex environments

Proven to help Ponto recipients hear speech better even in noise

Data on file at Oticon Medical, Doc-00121116, 2023



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OpenSound Optimizer™

Instead of just managing feedback, Ponto 5's OpenSound Optimizer can actually detect and prevent it from occurring.

Put simply, **proven to provide more gain with no audible feedback***.

*When fitted according to recommendation
Data on file at Oticon Medical, Clinical study BC109

GAIN



FEEDBACK



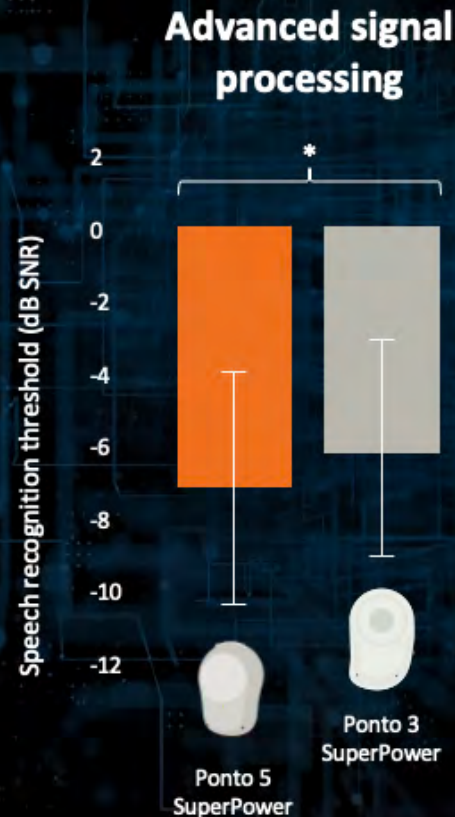
Proven to hear speech better

Ponto 5 SuperPower was shown to deliver

15% increased speech understanding

than Ponto 3 SuperPower in noisy environments

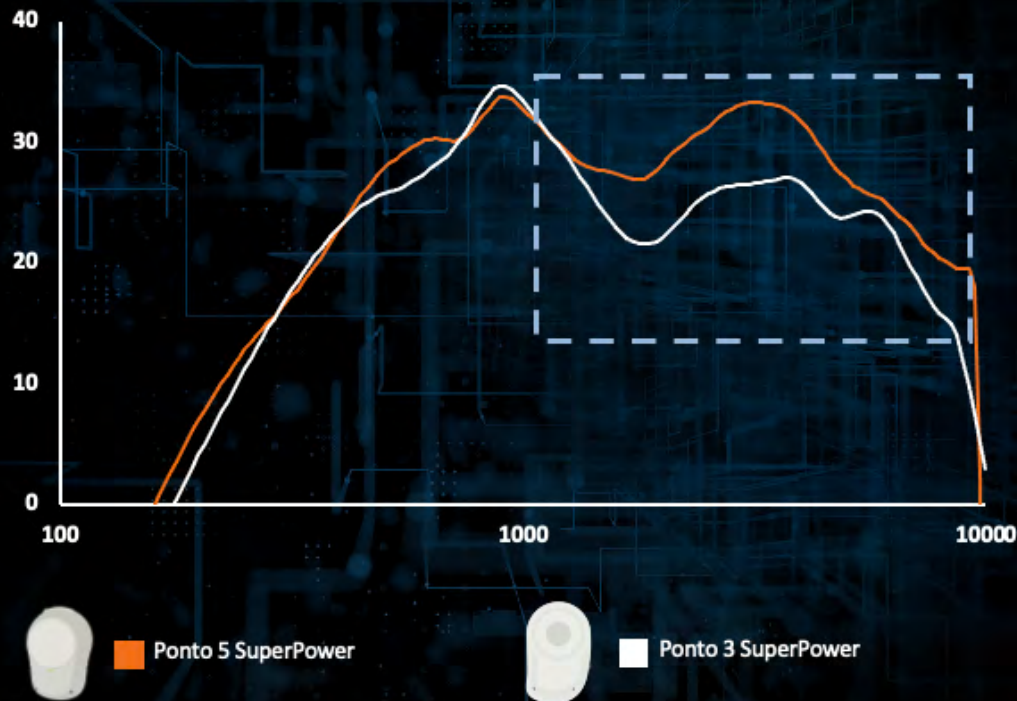
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Proven to deliver more gain

Ponto 5 SuperPower improves gain, ensuring soft sounds can be heard.



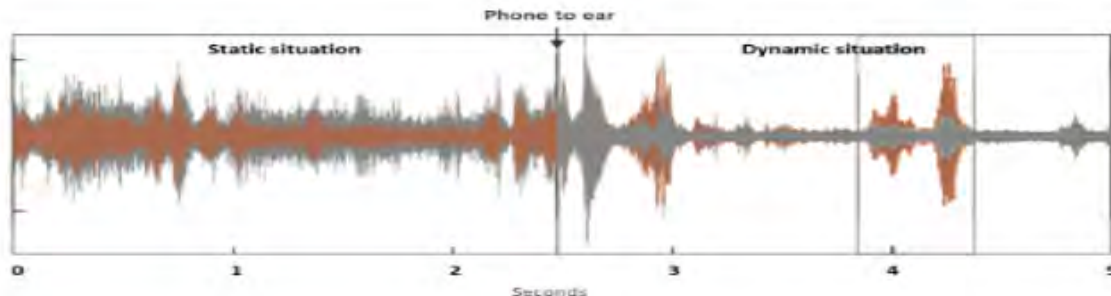
OpenSound Navigator and *OpenSound Optimizer* provide access to more sound than ever before

OpenSound Navigator

Preserves speech, constantly
adapting to the soundscape

OpenSound Optimizer

Stops feedback and
preserves gain; +6 dB
additional stable gain*



Together they allow more access to sound in a wider range of scenarios

Ponto 5 Family



Two sizes.
Superior fittings.
No compromise.

Ponto 5 Family Color Options



Chroma Beige



Terracotta



Chestnut Brown



Steel Grey



Diamond Black



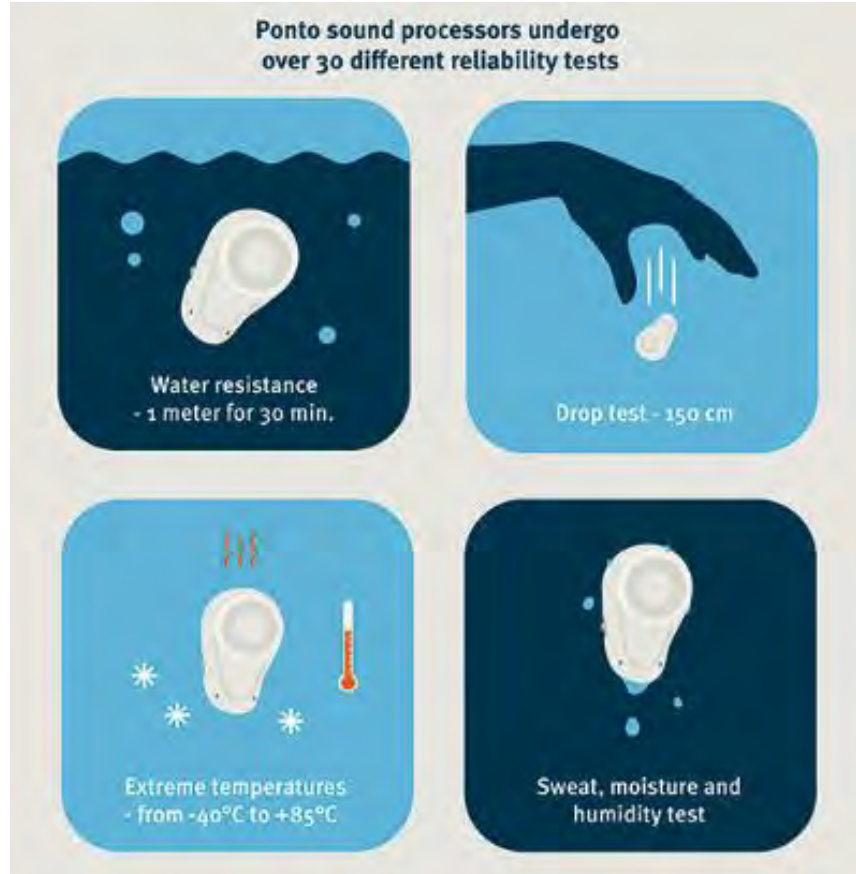
Silver

Ponto 5: Small on the outside, powerful on the inside



Reliable and Robust

IP 57
Rated



Connectivity options with Ponto 5 Family



Made for iPhone

Connect, call and stream directly

- Directly connect to iPhone®
- No app or other equipment needed
- Take phone calls
- Stream music

For information on compatibility, please visit
www.oticonmedical.com/wireless-compatibility

Apple, the Apple logo, iPhone, iPad, and iPod touch are trademarks of Apple Inc., registered in the U.S. and other countries.



Made for
 iPhone | iPad | iPod

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Oticon ON app

Connect and control directly

- Download on any phone, works directly
- Adjust volume/switch programs
- Choose accessories
- Discrete



Android Smartphones

Via wireless ConnectClip

- Hands-free calls from any modern smartphone
- Wireless streaming of voice and music
- Via ConnectClip which also acts as mic for calls

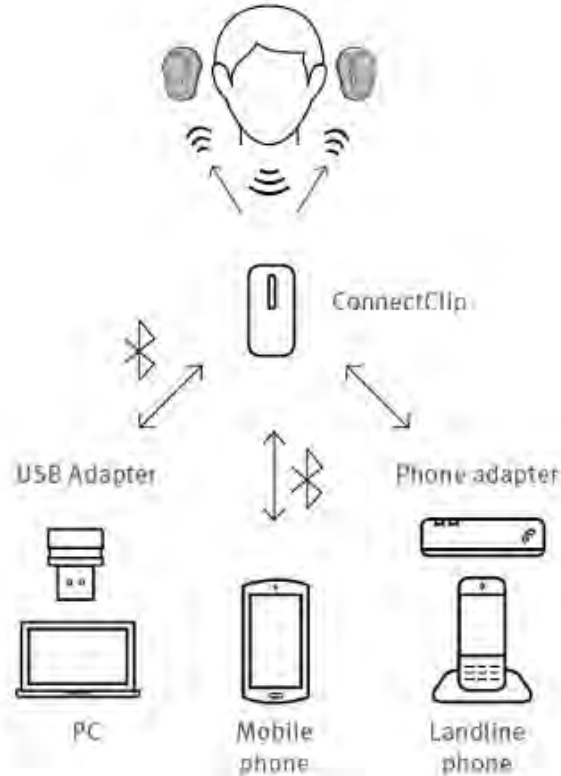


For information on compatibility, please visit
www.oticonmedical.com/wireless-compatibility

Oticon ConnectClip

Stand-alone features

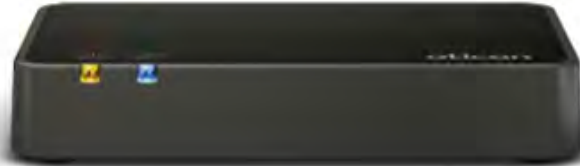
- Connect to any Bluetooth-enabled device
- Stream audio from music or phone call
- Transmit patient's voice via built-in mic
- Connect to phone adaptor



Phone Adapter 2.0

Receive calls at home via ConnectClip

- Connects to landline phone via ConnectClip
- Range of 30 meters (95 feet)
- Hands-free



Remote Control

Connect and control directly

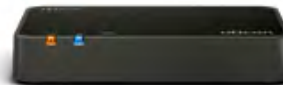
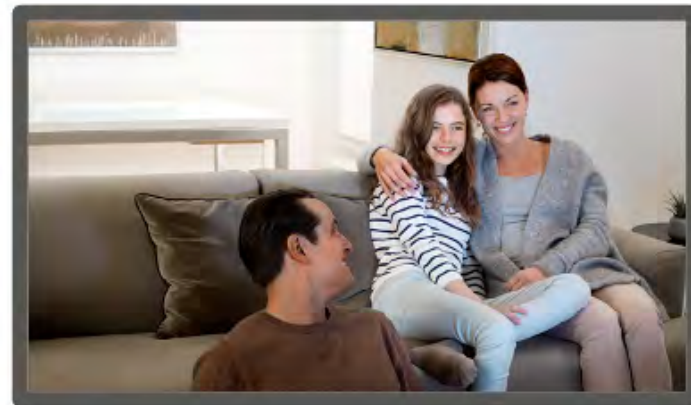


- Easy to use
- Big buttons, easily visible
- Size of a keychain
- Adjust volume, programs, accessories
- Works up to 1 meter (3 feet)
- Economically priced

TV Adapter 3.0

Stream directly

- Direct streaming to hearing devices
- Real-time stereo
- Easy pairing
- Multiple users can connect to the same TV adaptor
- Works up to 15 meters (49 feet)



EduMic Features

A Bridge Builder

2.4 GHz



Jack mode
(20 m range)
(65 feet)



User Control



FM mode
(3 m range)
(9.8 feet)



Telecoil mode
(3 m range)
(9.8 feet)



OpenSound Navigator



Microphone mode
(20 m range)
(65 feet)

Direct Sound Transmission vs. Skin Transmission



Softband

- Non-implant solution for children under the age of 5, or for those who do not have an implant and abutment

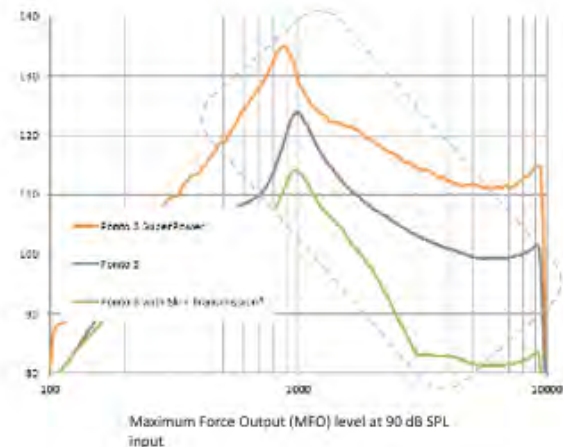
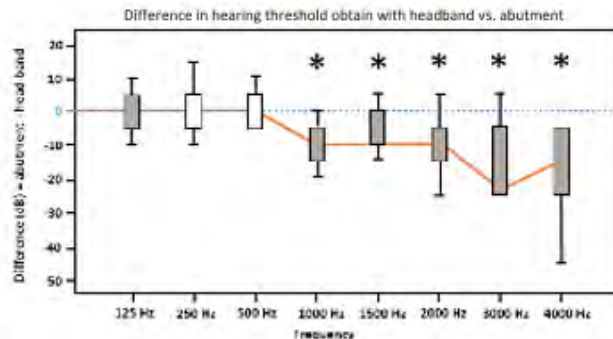
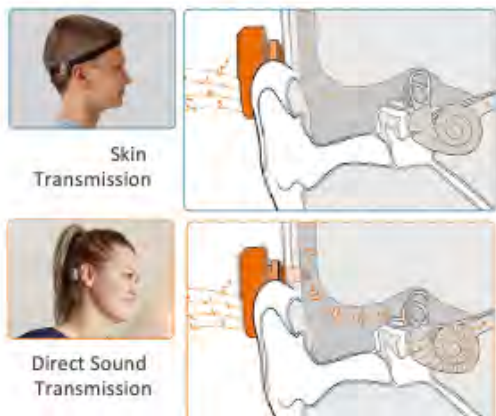


Softband vs. Abutment

- Sounds are attenuated in Skin Transmission solutions – even with Softband correction.

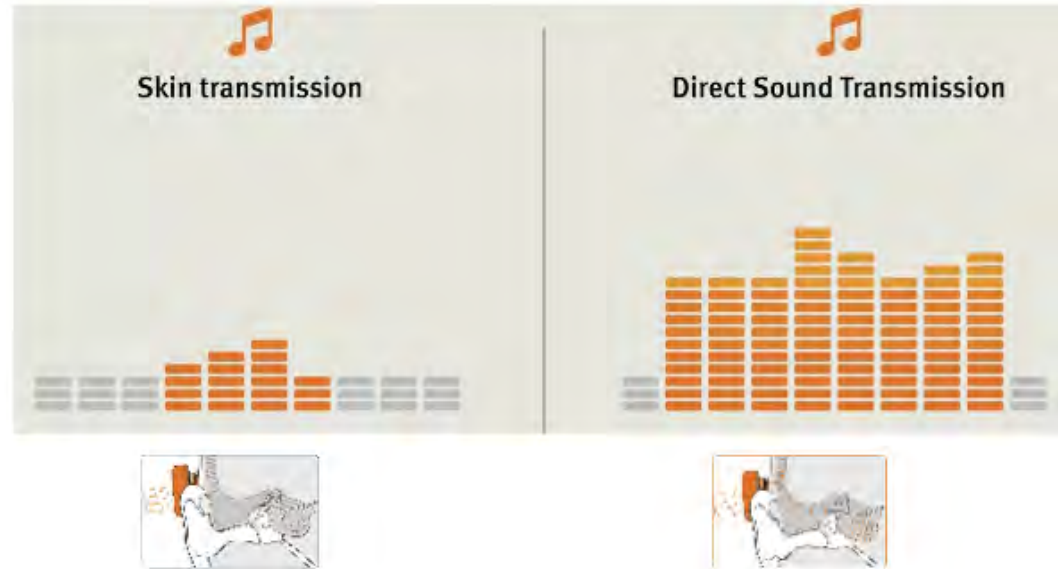
- Direct Sound Transmission systems can provide up to 20 dB of output in the mid to high frequency range.*

- The mid to high frequency range contains the most important sound information for speech understanding.



* Verstraeten et al (2008) Comparison of the audiologic results obtained with the bone-anchored hearing aid attached to the headband, the testband and to the 'snap' abutment. *Otology & Neurotology* 30: 70-75

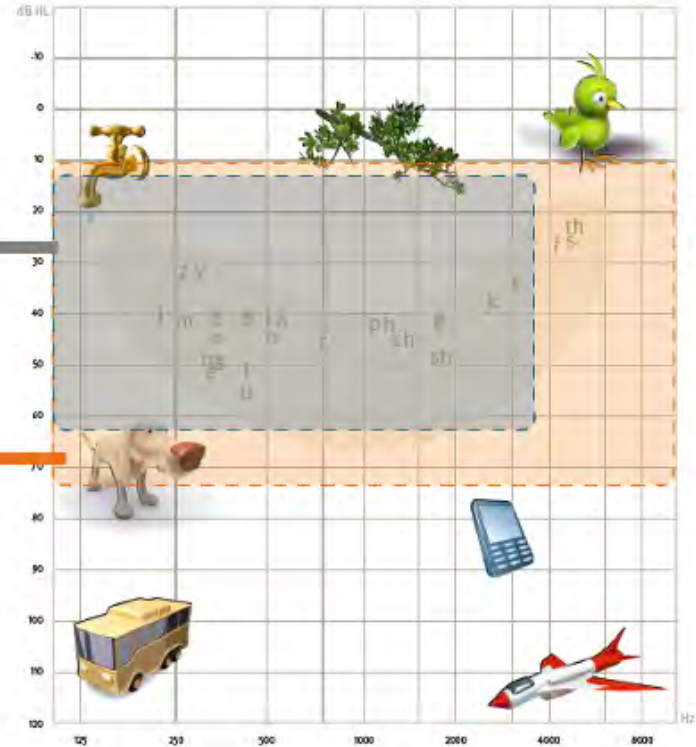
Another Way to Look at it!

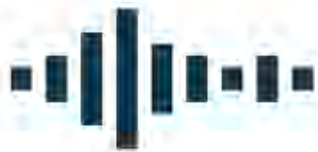


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03

Direct Sound Transmission vs. Skin Transmisson

- Consequence of skin attenuation of speech phonemes





Benefits of Direct Sound Transmission

Improvement in aided thresholds and speech perception testing

Better sound quality and performance

Increase in learning speed

Enhanced working memory

More high frequency emphasis with surgical transmission than with a soft headband since they are weakened by the passing through skin



Minimally Invasive Ponto Procedures



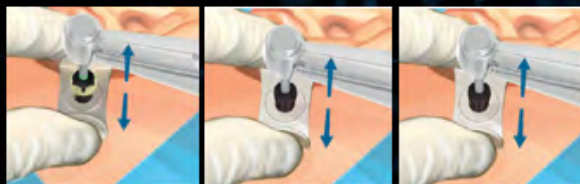
Transforming Surgery

Taking the lead in the surgical field

Linear incision



MIPS



MONO



MIPS and MONO Procedures

Developed by Oticon Medical for proprietary use

FDA cleared Minimally Invasive Procedures:

- MIPS (2015) indicated for patients above 12 years and older
- MONO (2021) indicated for patients above 18 years and older

Focused on improving an efficient procedure and post-operative outcomes

- Procedure time (anesthesia)
- Procedure simplicity
- Post-operative quality of life



The preferred choice of surgeons

The Ponto System is the only implanted bone-anchored hearing system that is truly minimally invasive



>90%

of all Ponto surgeries in the US used a minimally invasive procedure

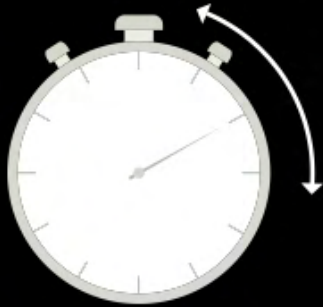
Data on file at Oticon Medical, Doc-00121115, 2023



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Minimally invasive

MIPS and MONO procedures are your confident choice



Proven to
reduce surgery time



Proven to
reduce costs



Proven to
improve quality of life

Small surgical footprint

Compared to other bone-anchored hearing solutions, Ponto has a smaller surgical footprint.

At 5mm, the Ponto System is not immediately noticeable in everyday life.



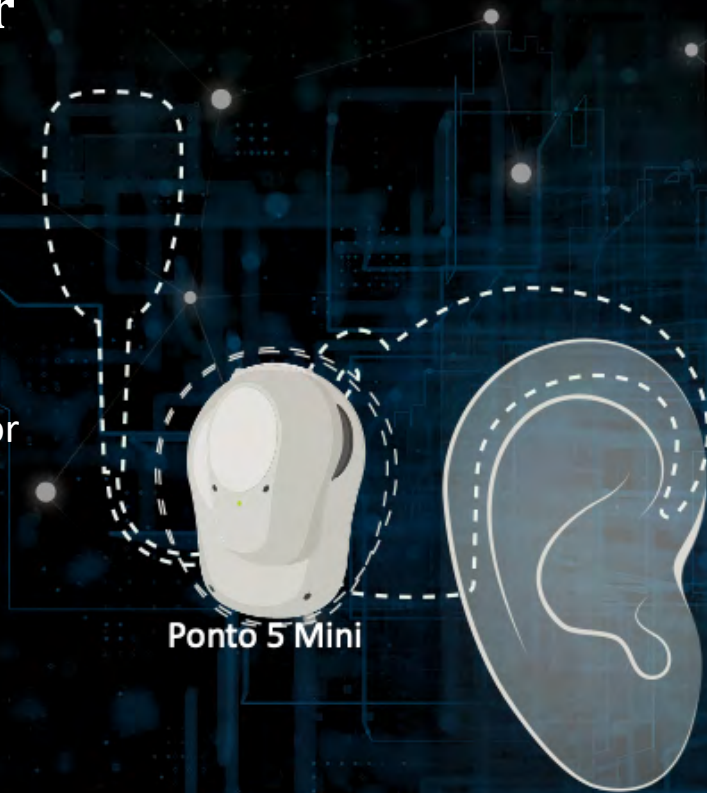
Competitor 2

Ponto

Smallest sound processor on the market

Everyday life is *with* the sound processor

This is the most important aesthetical
aspect



Ponto 5 Mini

Smallest MRI artifact size

BAHA 1.8 cm
Osia (magnet removed) 5.7 cm
BAHA Attract 11.5 cm
Osia (with magnet) 15 cm
Bonebridge 15 cm
Ponto 1.5 cm

At 1.5 cm, Ponto is the least prominent MRI artifact compared to other implants

Osia MRI Guidelines Cochlear Ltd. 2022

Cochlear BAHA Connect Radiographers Instructions 2014

Cochlear BAHA Attract Radiographers Instructions 2015

⁴Medel www.medel.com/docs/default-source/isi-important-safety-information/

Ponto product information sheet Oticon Medical 2022



Where do you find this information?

Data from

- Surgical manuals
- MRI guidelines

Always refer to the respective manufacturer's MRI guidelines

Reference: Artifacts while implants exposed to 1.5T



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Universal implant

Ponto System's universal abutment works with 100% of abutment level sound processors available today¹



Ponto System

The confident choice for your patients

Small

MRI conditional at 1.5T and 3T, with a shadow of less than 1.5cm

Non-restrictive

A Ponto procedure keeps future audiology choices open – leaving only a tiny scar if removed

Universal

Ponto System's universal abutment works with 100% of abutment level sound processors available today²



Implementing Ponto into Your Day



Why Implement Bone Anchored Hearing Systems into your Daily Practice?



- Similar to the traditional hearing aid process
- Individual clinics are rarely billed for processors directly
- Clinics set price for service contract
- 92626 can be billed for booth testing



The Thought Process:

This patient may be a candidate for a bone anchored hearing system.



Now what?

1) Do you schedule a bone anchored evaluation?

2) How much time do you have?

3) What demos do you have?

4) Where do I refer for surgery?

Ordering Processors

Surgical patients

- Processor ordered by surgery center along with surgical parts and often covered by insurance.

Softband patients

- Processor typically covered by insurance.

Patient pays out of pocket for fitting and follow up appointments

- Bundled? Unbundled?
- Same as hearing aid service pricing?

Upgrades



Upgrade process generally conducted through insurance



Clinician responsible for completing upgrade packet, including Letter of Medical Necessity signed by physician



Patient pays out of pocket for service



In cases of no insurance coverage, private pay purchase options available – speak with your local Oticon Medical representative

Minimal Follow Up

A review of programming data from the United States indicates an average of only

1.6

appointments per patient.

Data on file at Oticon Medical, Doc-00121116, 2023



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Achieving Better Outcomes:

Did you know?

The Ponto System changes patients' lives³

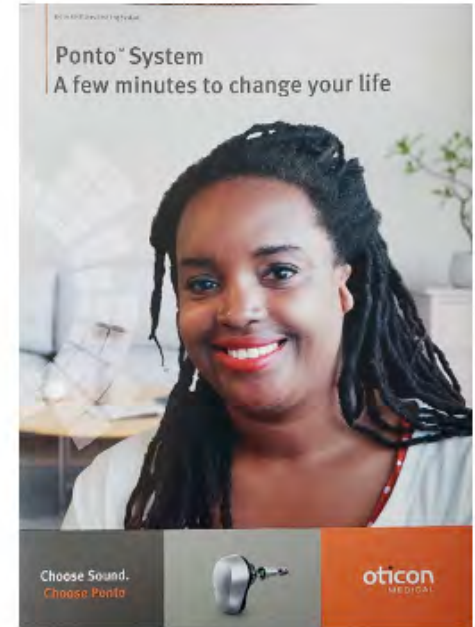
- 98% of all users report an **increase in quality of life** after Ponto surgery
- In 95% of follow-up visits, **no skin-related after-care treatment** is required
- 98% **implant survival rate** with the Ponto implants

3. Lagerkvist et al., (2020), Ten years of experience with the Ponto bone-anchored hearing system—A systematic literature review. *Clin Otolaryngol.* 2020; 45: 667– 680



Clinical Tools and Resources

- Sound Processor
- The QuickSIN Speech In Noise Test
- Subjective Questionnaire
- Test band (preferred) or Soft band
- Patient Counseling Materials
- Brochures



Recommended Test Procedure

Protocol Outlined

1. Fit patient with BAHS Sound Processor (using a Test Band if needed)

2. Program device according to fitting guidelines

3. Complete Speech in Noise Testing with the QuickSIN

4. Administer Self-Assessment Questionnaires

5. Complete Aided Sound Field Testing to Verify Functional Gain (optional)

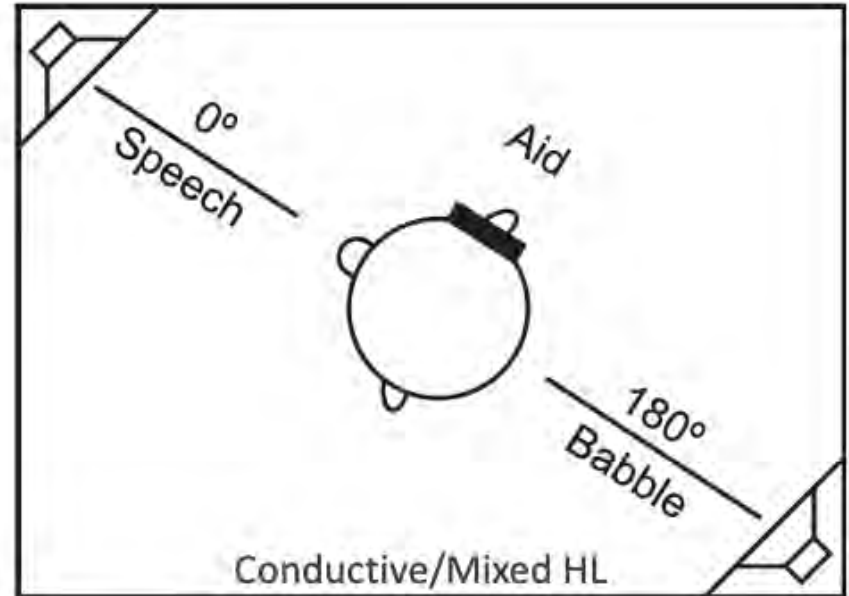
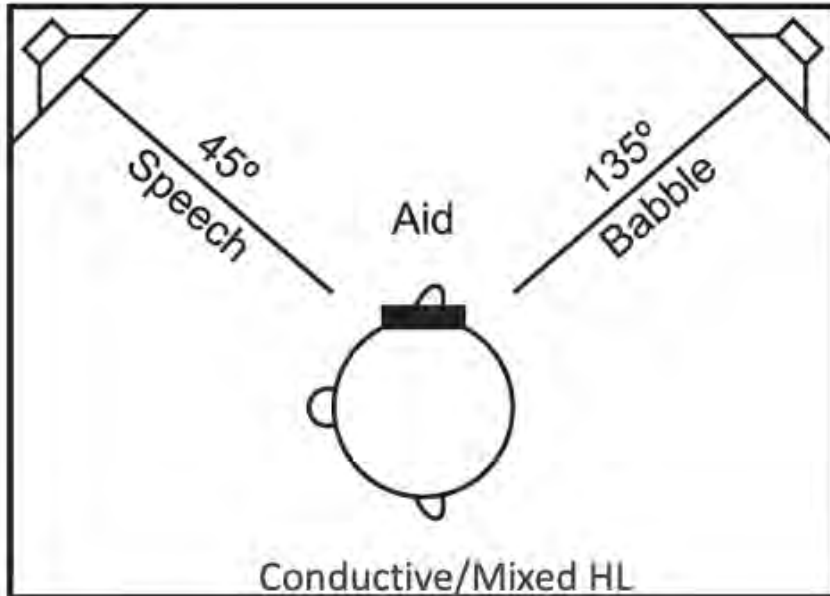
6. Complete Aided Word Recognition Testing (optional)

Test Procedure

Complete **AIDED** Speech in Noise Testing with the QuickSIN

Properly position patient in the sound booth with device turned on

Counsel patient on the test procedure and what response is expected

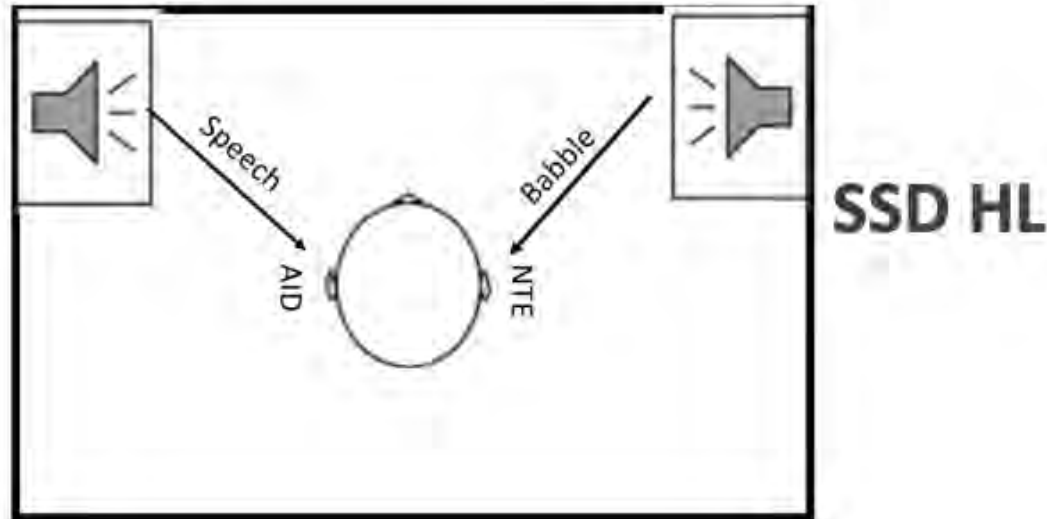


Test Procedure

Complete Aided Speech in Noise Testing with the QuickSIN

Properly position patient in the sound booth with device turned on

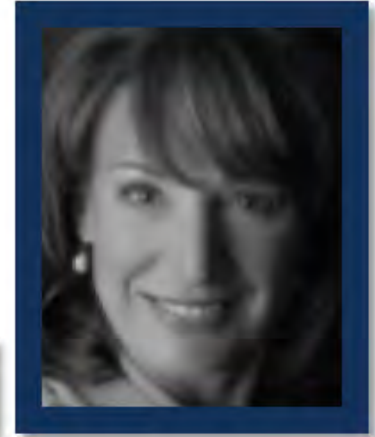
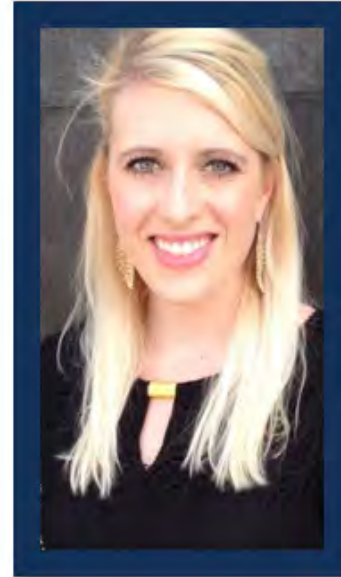
Counsel patient on the test procedure and what response is expected



Auditory Technical Services

Hours of Operation:

- Monday — Friday: 8:30 am - 5:30 pm EST
- Phone: 888.277.8014 Option #4
- Fax: 732.868.6949.
- Email: audiologysupport@oticonmedical.com





Thank you!

