

## Introducing Ponto Plus



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## Agenda

- Indications
- Ponto Plus Key Features
- Ponto Streamer and Connectivity
- Ponto Implant and Tissue Preservation



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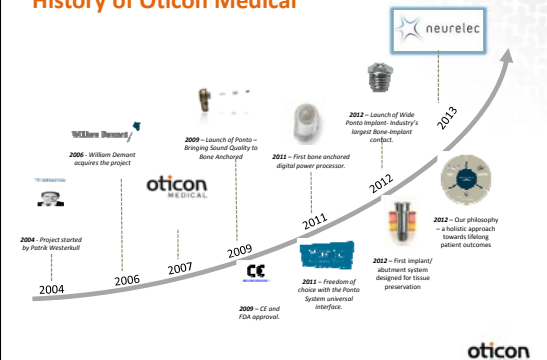
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## History of Oticon Medical



**2004** - Project started by Henrik Westergaard

**2006** - William Demant acquires the project

**2007** - **oticon MEDICAL**

**2009** - Launch of Ponto - bringing Sound Quality to Bone Anchored

**2009** - CE and FDA approval

**2010** - Freedom of choice with the Ponto System universal interface

**2011** - First bone anchored digital power processor

**2012** - First implant/abutment system designed for tissue preservation

**2012** - Launch of Wide Ponto implant - industry's largest Bone-implant contact

**2012** - Our philosophy - a holistic approach towards lifelong patient outcomes

**2013** - **neurelec**

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**We stand on a solid platform**



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**Review: Candidacy for the Ponto Bone Anchored Hearing System**



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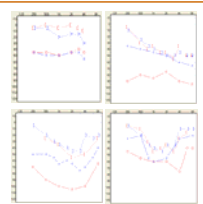
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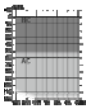
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**Candidates for the Ponto system**

**Conductive and mixed HL**



- If ABG >30 dB, speech recognition is likely to be better with a bone anchored sound processor than with a traditional hearing aid.<sup>1,2</sup>
- Bone Conduction (BC) threshold up to av. 55 dB HL



- Chronically draining ear  
- Congenital malformation  
- ...

1) Myerburg et al. Intra-individual comparison of the bone-anchored hearing aid and air-conduction hearing aids. *Otolaryngology-Head & Neck Surgery*. 1996; 114(3): 274-6.  
2) Wolf et al. Better performance with bone-anchored hearing aid than acoustic devices in patients with severe air-bone gaps. *The Laryngoscope* 121:653-656, 2010.

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### Candidates for the Ponto system

Single-sided deafness

- Sudden deafness
- Acoustic neuroma
- ...

• Average hearing threshold better than 20 dB HL

Av. AC < 20 dB HL

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### Candidates for the Ponto system

Conductive and mixed HL      Single-sided deafness

- 1) BC up to av. 55 dB HL
- 2) if ABG >30 dB, speech recognition is likely to be better with a bone anchored sound processor compared to a HA

Normal hearing in best ear (av. AC ≤ 20 dB HL)

Other medical background:  
-Skin allergies in ear canal

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### Ponto Plus complete family of sound processors

**Ponto Plus**  
Up to 45 dB HL

**Ponto Plus Power**  
Up to 55 dB HL

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New transducer



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The ear is a cool instrument...

- Imagine using the same scales for an ant and an elephant



- Difference in weight is 1.000.000 times
  - Or equally, 120dB

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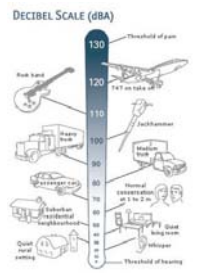
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As you know, that's what the ear does...

- The dynamic range of the (healthy) ear is 120-140dB!



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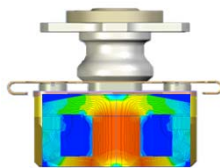
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### What we have done

- Maximizing the magnetic field in the vibrator
  - Same well-proven reliability
  - Same small size
  - Approx. 60% higher output for the same power consumption



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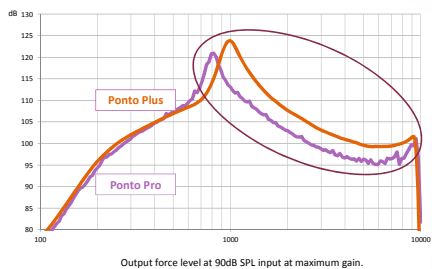
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### The result A more powerful sound processor



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Ref: Oticon Medical tech sheet

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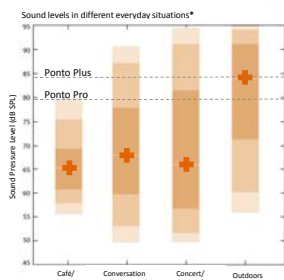
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### A new powerful transducer More of the everyday sounds



\*Based on recordings of users' everyday situations and a typical Ponto user. The exact effect for a user will depend on the situation, hearing loss and choice of sound processor.

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Inium Feedback Shield



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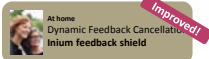
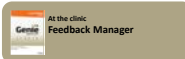
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Ponto Plus: Continuation of Two-stage Feedback Management System

Two-stage Feedback Management System



Improved!

"People are different" "Situations are different"



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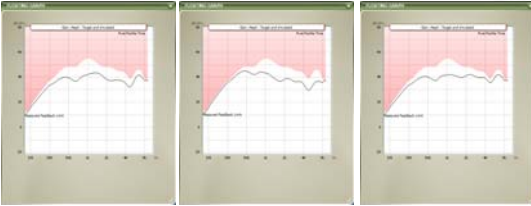
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Feedback handling in Ponto Plus Feedback Manager

Individual feedback limits – because people are different



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### Feedback handling in Ponto Plus Dynamic Feedback Cancellation

Feedback path varies - because situations are different

In quiet      On the phone      With helmet      During a hug

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### The parts of Inium feedback shield

Two-stage Feedback Management System

At the clinic: Feedback Manager

At home: Dynamic Feedback Cancellation, Inium feedback shield *Improved!*

Measurement: Individual feedback limits

Phase inversion, Frequency shift, Feedback limit estimation

The new feedback shield limits feedback through a variety of advanced signal processing strategies

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### Inium feedback shield Advanced signal processing components

- Phase inversion
  - Subtract a "copy" of the feedback path

900Hz      10 kHz

10kHz: Dynamic Frequency shift *New!*

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### Different DFC settings Frequency shift is not used for everyone

- **Off:** Inium feedback shield turned off
- **Medium:** Feedback shield without frequency shift
- **Max:** Feedback shield including frequency shift

• DFC prescription is based on prescribed gain and type of hearing loss



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### Wireless capabilities



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### The Ponto Streamer

The most connectivity opportunities in one system

ONE DEVICE CONTROLS ALL NEEDS



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### The Ponto Streamer



Giving users more communication possibilities

Communicate and interact to stay informed and be entertained.

T-coil built in

- Cell Phone: Communicate hands-free on the mobile
- Talk Loop: Listen to music directly in Ponto Plus
- Music: Listen to music directly in Ponto Plus
- Computer: An easy way to switch channels or adjust the volume on Ponto Plus.
- Remote: An easy way to switch channels or adjust the volume on Ponto Plus.

The Ponto Streamer gives you all these communication possibilities / functionalities.



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### The Ponto Streamer

The most connectivity opportunities in one system

Using an additional device (ConnectLine, FM receiver ...)

- Cell Phone
- Talk Loop
- Music
- Computer
- Remote
- TV
- Phone
- Microphone
- FM
- Office Phone



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### ConnectLine and accessories

Extending the communication possibilities

- ConnectLine TV adapter
- ConnectLine Microphone
- ConnectLine Phone adapter
- FM
- Office Phone
- EURO pin socket

The ConnectLine products are the same as for Oticon Streamer and hearing aids.



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### ConnectLine and accessories

Extending the communication possibilities




TV – Streamer:  
Up to 30 m

Microphone – Streamer:  
Up to 15 m

ConnectLine TV adapter    ConnectLine Microphone    ConnectLine Phone adapter

The ConnectLine products are the same as for Oticon Streamer and hearing aids.



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### Ponto Streamer/ConnectLine - Ease of use

- Pair the ConnectLine product with the Ponto Streamer (done once)
- After pairing, the Streamer and the ConnectLine product connect automatically
- Single push on Streamer button and the phone, TV, etc. is activated
- Input is automatically prioritized in order of importance (phone signal has highest priority)



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### Accessories – FM



FM receivers that connect to a Euro pin socket.  
e.g. Oticon Amigo R2

In case of a bilateral Ponto Plus fitting  
– only one FM receiver is needed.



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### Ponto Streamer buttons/plugs

- Fully charged the Streamer last up to 10 hours

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### Durable, reliable & easy to operate

- With IP57 classification against moisture and dirt – the highest in its class\*

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### Personalize Ponto

- Colorful skins and stickers

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### Wearing the Ponto Streamer

- Does it have to be worn around the neck?

No, it can be put in your pocket.

To work in this way, the Streamer needs to be linked to the Ponto Plus sound processor(s).



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### Ponto Streamer

Ponto Streamer status	sends signal	to be used
Open Streamer <small>as it comes from factory</small>	to any Ponto Plus within 1 m	- with neck loop
Linked Streamer <small>(linking takes place in Genie Medical)</small>	only to the linked Ponto Plus	- with or without neck-loop

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### Ponto Plus Better hearing when you need it most

- More of the everyday sounds through new **powerful transducer**
- Less feedback & fewer artificial sounds with Inium **feedback shield**
- New **Wireless** communication possibilities via Ponto Streamer

✚ All the existing, well known features of the current Ponto sound processors



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**At your hands**

The infographic features a central circle with the text "Lifelong patient outcomes" in the middle. Four arrows point from this center to four different product categories: "OptiGrip™ design for improved implant stability" (top), "OptiGrip™ skin-friendly abutment concept" (right), "Ponto™ sound processors for superior sound quality" (bottom), and "Ponto™ Streamer for wireless communication" (left). Below the central graphic, there are two pairs of hearing aids and a row of seven different colored hearing aid shells. The Oticon Medical logo is in the bottom right corner.

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**Tissue Preservation Surgical Technique**

The slide shows a white hearing aid on the left, a photograph of a smiling woman in the center, and two hearing aid shells on the right. The Oticon Medical logo is in the bottom right corner.

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**OptiGrip™ Implant Geometry**

Designed for **improved stability** - enabling longer abutments

**OptiGrip™ geometry**  
Designed for improved stability  
Largest initial bone contact surface in the industry

The diagram shows a cross-section of an implant with a wide, flared top section. A dotted line points from the text "Largest initial bone contact surface in the industry" to this wide section. To the right, two different implant designs are shown: a "Wide (∅ 4.5mm) Ponto implant" and a "Ponto (∅ 3.75mm) implant".

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### OptiFit™ for Tissue Preservation

OptiFit™ design for minimal interference, aimed to prevent skin irritation and infections.

- Perfectly matched to the tissue
- Abutments for different skin thicknesses
- Implant stability enabling longer abutments



The diagram shows a cross-section of the ear with two types of abutments: OptiFit™, which is wider and shorter, and OptiGrip™, which is narrower and taller. A photograph shows a patient's ear with a hearing aid.

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### Tissue Preservation Surgery

**No tissue reduction** - leaves a surgery area with full blood supply and minimal scar tissue

Two incision types:

- Incision aside the abutment (Method published by Prof. Hultcrantz)
- Abutment in the incision line



The diagrams show two surgical approaches: one with an incision made to the side of the abutment, and another with the abutment placed directly within the incision line.

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### Tissue Preservation with the Ponto System

Benefits

- Better cosmetics
- Less numbness and pain
- Quicker healing
- Minimal scar tissue
- Quicker surgery
- Fully reversible



The grid of six photos shows various views of the Ponto System hearing aid, including the device itself and the surgical site on the ear, demonstrating its integration with the ear's natural structure.

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### Thank you!

- Q&A
- Another presentation in two weeks
- Check out [www.oticonmedical.com](http://www.oticonmedical.com)

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