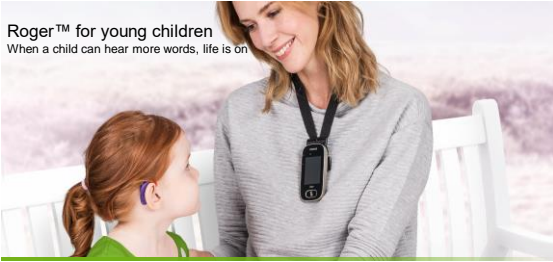


## Roger™ for young children

When a child can hear more words, life is on



Stacey Rich, MCI Aud  
Manager of Phonak Pediatrics, Stafa Switzerland  
A Sonova brand

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life is on

## Agenda



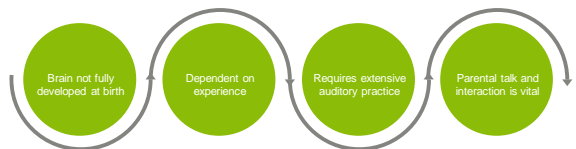
1. Building the foundation for brain development
2. Roger – the right choice for young children with hearing loss
3. Real-life benefits of using Roger

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# 1

## Building the foundation for brain development

### The foundation is built in the first three years



Platen, C (2018). The ears are doorways to the brain. *Phonak insight*. Retrieved from [www.phonak.com/insights](http://www.phonak.com/insights), accessed May 23rd, 2018

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### To be ready for school children need to



Hear approximately  
45 million words  
by the age of 4 years.<sup>1</sup>



Have 20,000 hours of listening  
in infancy and early childhood  
as a basis for reading.<sup>2</sup>



Have back and forth exchanges and be  
engaged in conversation.<sup>3</sup>



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<sup>1</sup>Holt, B. & Nelson, K. (1986). *Language development in the early experience of young American children*. Baltimore, MD: Paul H. Brookes Publishing  
<sup>2</sup>Cheney, C. (2018). *Reading in the Brain: The science and evolution of a human innovation*. New York, NY: Viking  
<sup>3</sup>Taffes, A. (2018). February 13. Back-and-forth exchanges boost children's brain response to language. *MIT News*. Retrieved from <http://news.mit.edu/2018/conversation-boost-children-brain-response-language-0214>, accessed May 23rd, 2018

### Guarding against language delay for children with hearing loss



3 key predictors of better outcomes:



Well fit hearing aids



Consistent hearing aid use



Quality language input

McChesney, R. W., Walker, E. A., Spangford, M., Bender, R., Hobbs, L., Roach, P., & Mosher, M. P. (2015). Longitudinal predictors of aided speech-audibility in infants and children. *Ear and Hearing*, 36 Suppl 1, 24–37.

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### Listening in noise and over distance

40%

of speech in a child's typical day comes from a distance of over six feet and/or with 'overlapping' noise



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Mills, J & McCracken, W. (2014, April 8). The Use of FM Technology for Pre-School Children with Hearing Loss. PhD publication.

2

## Roger – the right choice for young children with hearing loss

### Roger is the solution



Roger is a digital, wireless remote microphone system



Roger provides speech and language access in noisy situations and over distance



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### Roger improves speech understanding in noise

54%

Over FM systems for hearing aid users<sup>1</sup>

40%

Over FM systems for CI users<sup>2</sup>

<sup>1</sup>Hilborn, L. (2014). Comparison of speech recognition with adaptive digital and FM wireless technology by listeners who use hearing aids. *Ann J Audiol* 23(2):207-210

<sup>2</sup>Petrucci, J. et al. (2013) Evaluation of speech recognition of cochlear implant recipients using a personal digital adaptive radio frequency system. *Journal of the American Academy of Audiology* 26(8): 714-724

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### Other remote microphones - limitations for young children

Require button press to activate signal

Only one microphone can be used

Not compatible with all hearing aids & cochlear implants

Fixed gain model at all noise levels

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### Roger remains the digital standard

#### Transmission

Once connected - transmission is **fully automatic**

#### Adaptive behavior

Receiver gain **adjusts based on ambient noise level**

#### Fully compatible

Receivers can be **used with virtually all hearing instruments**  
**Multiple microphones** can be used together in the same network

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## Best choice for little ears and growing brains

- ✓ Water resistant and robust housings
- ✓ Safety and security options
- ✓ Outstanding hearing performance
- ✓ Compatibility with Roger 18 or Roger 19



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## Roger is the right choice



Roger Touchscreen Mic



Roger Pen™



Roger Select™



Roger Clip-on Mic

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## Roger receivers for young children



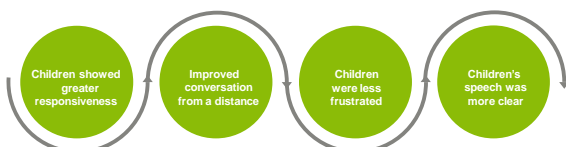
★ IP68 rating and tamperproof available for children 0-3 years old

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## 3

## Real-life benefits of using Roger

## Positive impact of use at home – parents reported



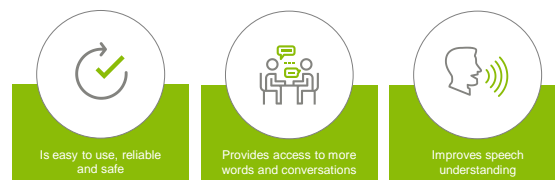
**5,300** more words per day\*

\*Compared to using hearing aids alone. Based on average hearing aid use time of an 8 hour day

Bertha Baran, C.R., Angley G., & Theria, A.M. (2016). Remote microphone system use at home: Impact on caregiver talk. *Journal of Speech, Language and Hearing Research*, Vol. 61, 399-409.

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## Roger is a must for young children with hearing loss



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**Together,  
we change lives**