

ReSound Relief: Tinnitus Management in the Digital Age

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Learning Outcomes

After this course learners will be able to.....

- Explain how to implement the Relief app (application) into their tinnitus management services.
- Explain how to guide and educate patients on proper use of the Relief app.
- Explain how to locate and interpret app store Ratings, Reviews and Development Updates.

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Course presented in partnership with

The Future of Tinnitus is Now:

Mobile Technology and Data Analytics

- Each day the following happens on the internet...

- 6 Billion Google daily searches
- 500 Million Tweets are sent
- 4.3 Billion FB messages/5.75 Billion FB likes
- 3.6 Billion Instagram likes
- 4 Million hours of Youtube content uploaded



90% of all data has been generated over the last 2 years

2.5 Quintillion bytes of data are created daily!

(million, billion, trillion, quadrillion, quintillion, sextillion, septillion, octillion, nonillion, decillion, etc.)

Sources: Sciencedaily.com, vcloudnews.com, blog.microfocus.com

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The Future of Tinnitus is Now:

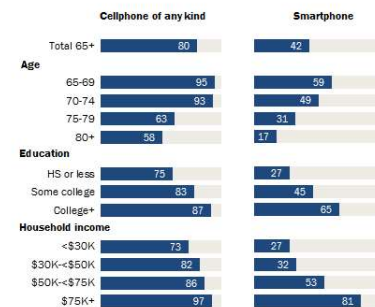
Mobile Technology

Four-in-ten seniors now own smartphones, more than double the share that did so in 2013

With **smartphone ownership** in the U.S. more than doubling in the past five years, Americans are embracing mobile technology at a rapid pace. And while adoption rates among seniors continue to trail those of the overall population, the share of adults ages 65 and up who own smartphones has risen 24 percentage points (from 18% to 42%) since 2013. Today, roughly half of older adults who own cellphones

Roughly four-in-ten seniors are smartphone owners

% of U.S. adults ages 65 and older who say they own the following ...



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The Future of Tinnitus is Now:

Is our delivery model working?

Table 1. Respondents' perceptions before and after their initial hearing evaluation, in percentage, as it related to whether audiology should be classified professionally as (a) medical, (b) rehabilitative, or (c) consumer electronics.

Professional Classification of Audiology	Pre-Appointment	Post-Appointment
A. Medical	23%	9%
B. Rehabilitation	63%	28%
C. Consumer Electronics	14%	63%

In addition, we asked respondents whether they were interested in hearing aid technology to overcome their listening difficulties before and after their initial appointment. The data, shown in table 2, revealed:

Table 2. Respondents' perceptions before and after their initial hearing evaluation, in percentage, towards hearing aid technology.

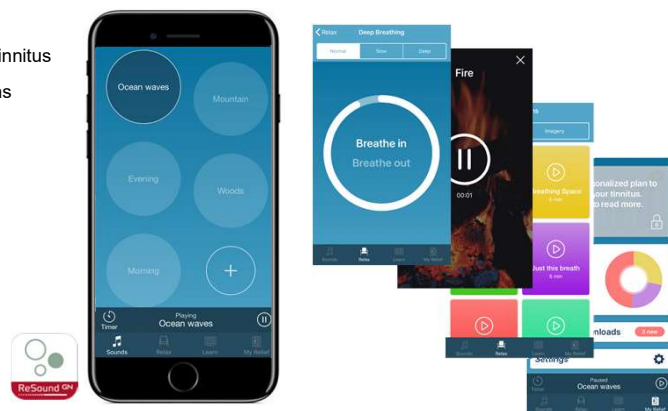
Interest in Hearing Aid Technology	Pre-Appointment	Post-Appointment
Yes	67%	22%
No	33%	78%

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RS Relief app guides users in understanding and managing their tinnitus

- Guidance
 - Educational information about tinnitus
 - Tips and practical exercises to help cope with tinnitus
 - Links to Tinnitus Organizations and Associations
- Personalization
 - Customize soundscapes
 - Identify your tinnitus type (*)
 - Create a personalized tinnitus plan (*)
 - Track your usage and plan progress (*)
- Accessibility
 - No expensive requirements: any smartphone & normal headset
 - No Hearing Aids required
 - Mobile: Have it with you at any time.



* Premium features

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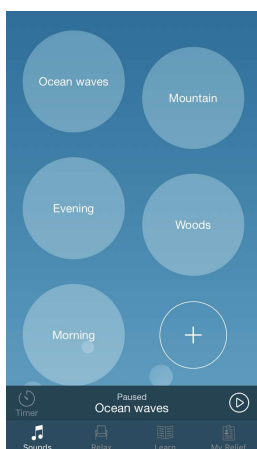
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ReSound Relief – User Onboarding

Onboarding means, to introduce and provide instruction to the user how to navigate and use the basic functions of the app.



ReSound Relief – Sounds



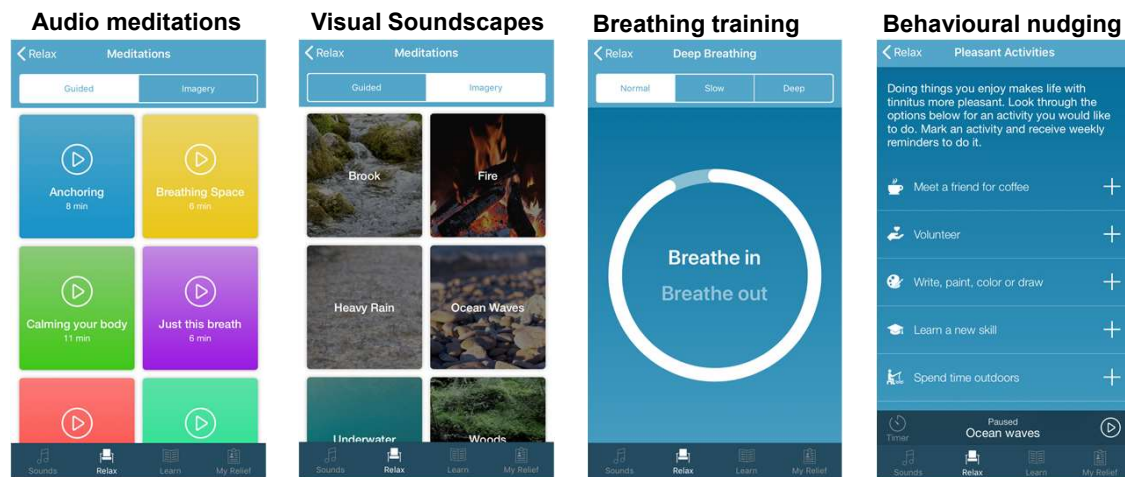
The main screen of ReSound Relief is SOUNDS

Each bubble on the screen represents a Soundscape, a combination of sounds that, when played, can help interact with the individual tinnitus that is experienced by the user.

From this screen the user has quick and easily play, edit or build Soundscapes.

ReSound Relief – Relax

The heart of the tinnitus toolbox is in the RELAX section, here the user finds the different tools to help manage their tinnitus.

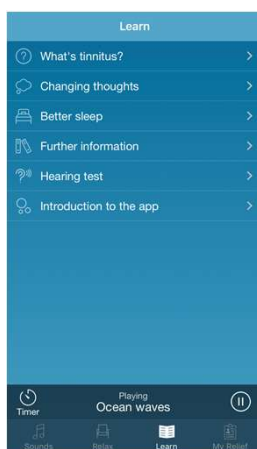


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ReSound Relief – Learn



Our LEARN section will provide the latests information on tinnitus and tips for improving the relationship with tinnitus.

Quick access to our online hearing test, since we know that 85% of those suffering from tinnitus also have some degree of hearing loss, this is a relevant place to start learning about hearing loss as well.

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ReSound Relief – My Relief



MY RELIEF collects everything related to the usage of the app and is also the accesspoint for personalized guidance.

My Plan (subscription applies): When we have identified the unique tinnitus profile of the user we can generate a personalized plan for the user to follow, guiding them towards what tools to use and for how long to reach the best results in managing their tinnitus.

Usage: How are you using the app, what part and how much in a historical view

Additional downloads: Downloads the latest sound files to add to your soundscapes or new meditations.

Settings: App settings to give you the best listening experience fx control sound balance.

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ReSound Relief Premium - Features

Choose from different therapies and exercises to help you relax from the stress and anxiety caused by Tinnitus

About your tinnitus

In order to create a perfect plan to manage your tinnitus, please answer the following questions:

Does your tinnitus make it difficult to relax?

Never Sometimes Always

Does your tinnitus make it difficult to concentrate and/or focus?

Never Sometimes Always

Next

Identify Problems

Identify what are the most common problems your tinnitus causes in your daily life

Type of tinnitus

Please select the sound which resembles your tinnitus the most

A B C D

None of the above

Previous Next

Identify Tinnitus Type

Listen to different frequencies and identify which one is closer to the sound of your tinnitus

Recommended Plan

Based on your input, for this week, we recommend:

Sound: 01h:33m

Sound therapy helps to reduce the focus of the tinnitus by providing background sounds of your choice. Based on your answers, we have created additional SoundScapes we believe you will find helpful in countering the stress and tension caused by tinnitus. These SoundScapes can be found at the top in the Sounds section.

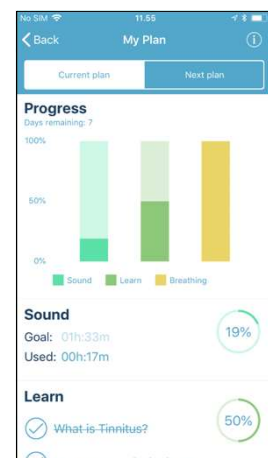
Learn: 4 topics

Learning about tinnitus can help you better understand your tinnitus and change how you feel about it. Links to the best resources are available at the bottom.

Previous Done

Personalized Plan

Obtain a personalized plan based on your input. The plan changes every week to help you learn how to manage your tinnitus



Track your progress

Track your progress to be sure you reach the goal every week!

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Tinnitus apps statistics

By March 2019...

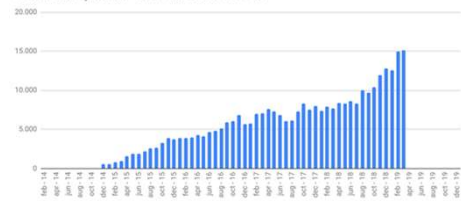
+340,000 combined downloads

+53,000 Monthly Active Users

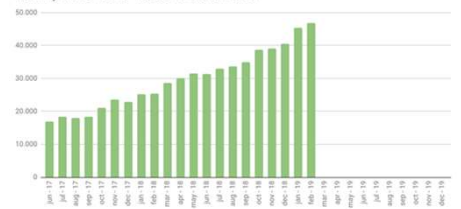
4.7 ★★★★★ rating out of 5 / **1750+** reviews in US

(Both **highest in the industry** for any app -
not just tinnitus!)





Downloads by month - ReSound+Beltone total



Monthly Active Users - ReSound+Beltone total



Benchmarking: Relief is clearly outperforming direct HI competition (by Jan 20th 2019)

				
FEATURES	ReSound Relief	Oticon Tinnitus	Phonak Balance	Starkey Relax
KPI (US; iOS platform)	DL: 294.000 Reviews 1.200 / Rating: 4.7	DL: 241.000 Rating: 4.8 (only 8 reviews)	DL: 155.000 Reviews 7 / Rating: 1.7	DL: 3.000 Reviews 14 / Rating: 4.0
Monthly Active Users (12.2018)	approx. 40.000 (incl. Beltone Calmer)	approx. 10.000	approx. 8.000	No data available
Sound Masking	<ul style="list-style-type: none"> • Environment Sounds (35) • Musical sounds (8) • Therapeutic (4) • Create Sounds (mix) • Sleep timer • L/R Ear output • High Definition audio files 	<ul style="list-style-type: none"> • Environment Sounds (7) • Pink / White sounds • Sound organizer - Types (3) - Situation (7) • Import Sounds • Sleep timer 	<ul style="list-style-type: none"> • Environment Sounds (10) • Sound organizer - Types (3) - Situations (0) • Import Sounds • Sleep timer 	<ul style="list-style-type: none"> • Environment Sounds (8) • Musical sounds (3) • White sound • Customize sounds (bass/treble) • Sleep timer
Relaxing Therapies	<ul style="list-style-type: none"> • Guided meditations (20) • Breathing • Imagery (4) • Pleasant activities 	<ul style="list-style-type: none"> • Breathing • Muscle Relax 		
Usage Statistics	<ul style="list-style-type: none"> • Daily, Last day, 7 days, 30 days • Therapies distribution • Most used soundscape • Most used guided meditation 		<ul style="list-style-type: none"> • Average Usage (hours/day) • Sound types vs situations 	
Information	<ul style="list-style-type: none"> • What's tinnitus / Causes and therapies • Sleeping tips / Changing thoughts 			<ul style="list-style-type: none"> • What's tinnitus / Symptoms & causes • Lifestyle & Treatment / Solutions
Others	<ul style="list-style-type: none"> • Personalized Plan • Hearing loss test (link to online version) • Tinnitus association contact info • Downloads 			

Reviews

★★★★★

"I have no other way to describe this app. All I can do is thank the developers for this wonderful application since I suffer from tinnitus by damage to the auditory nerve and this app helped me at night to sleep and be able to sleep without problems. I definitely think it's the best of its kind."

Clinician: Sent to Michael Piskosz

"I just presented the updated relief App to the Phoenix VA and the tinnitus audiologist were freaking out over the update! They love it love it love it! Great work!"
VA (the association in US which was the reason we started creating the app in the first place)

★★★★★

"Beautiful app. Seamless and the soothing sounds are perfect. Thanks for an amazing app. Keep up the great work."

★★★★★

A free app for sufferers...glad.. experiencing this app for my gf who is currently suffering from tinnitus..thanks alot.

★★★★★

This app really helps with my tinnitus. Also, I get much lower BP readings after using the "relax" mode. Can believe there is no more reviews.

★★

A good app and useful until this latest update when it needs access to more of my files. Now it's time to uninstall.

★★★★★

Application wonderful! It contains valuable information on how to deal with tinnitus. very important health tips.

★★★★★

Thank you, really thank you, I found the peace he needed, highly recommended, thank you that you created an app to benefit others ..

Clinician: Sent to Michael Piskosz

I love it!!!! Best tinnitus app resource to date! All clinicians should know about this and use it with their clients. All graduate students should use it as a learning resource and eventually a tool for treatment.

★★★★★

Excellent application with many possibilities in varying sounds

★★★★★

Excellent!

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Relief Validation Study – Dept of Teleaudiology, Warsaw, Poland

PP1404

Effects using of the ReSound Relief application in therapy of tinnitus

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3 Institute of Sensory Organs, Lodz, Poland



INTRODUCTION

Treatment of tinnitus is a challenge for the modern medicine, because of the difficulty to establish the etiology. For now, it is impossible to select one therapeutic pathway. Therefore the large number of people with tinnitus is using the sound therapy to reduce the nuisance of the tinnitus. Applications installed on mobile phones are designed to make life easier. Nowadays, we can see there are more and more tools in the field of medicine, for example virtual audiometers or applications for the treatment of tinnitus. One of them, is the ReSound Relief application. It is designed to help people to distract them from tinnitus and reduce their nuisance. The ReSound Relief uses sound therapy principles as well as relaxation, breathing and meditation exercises. Everyone can install application for free on Android and iOS phones.

AIM

The purpose of the study was to determine the suitability of ReSound Relief application in the treatment of tinnitus.

MATERIAL

50 people aged 19-65 were involved in the study. These persons were hospitalized for tinnitus on the Institute of Physiology and Pathology of Hearing. All of these patients were using the application for 3 months.

METHOD

The effectiveness of the application was assessed on the basis of the results of the used questionnaires. For the evaluation for the nuisance of tinnitus we used Tinnitus Functional Index and Tinnitus Handicap Inventory questionnaires. The questionnaires were filled before the application was installed and after 3 months of use. Finally the respondents also completed general satisfaction survey about using the applications.

RESULTS

Statistical analysis was performed for 44 people. The missing 6 patients did not return the completed questionnaires. The presented results are preliminary, obtained after 3 months of using the application. Figure 1 illustrates the results obtained from the Application Quality Assessment Questionnaire. Patients responded on a 5-point scale: definitely YES, rather YES, hard to say, rather NO, definitely NO.



Figure 1. Percentage of answers given: DEFINITELY YES or RATHER YES

Figure II presents the general results obtained by patients in the TFI questionnaire. Before applying the application, patients obtained a general average score of 45.7 points, which corresponded to a moderate problem with tinnitus. After 3 months of application, an average score of 30.5 was obtained, which indicates a small problem.

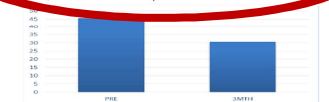


Figure 2. Average general results obtained in the TFI questionnaire.

Figure III shows the overall results obtained by patients in the THI questionnaire. Before applying the application, patients obtained a general average score of 53.4 points, which corresponded to a moderate problem with tinnitus. After 3 months of application, an average score of 32.2 was obtained, which indicates a mild tinnitus sensation.

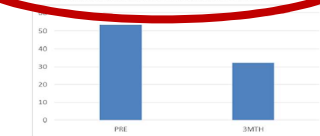


Figure 3. Average general results obtained in the THI questionnaire.

CONCLUSION

The possibility of using mobile applications in everyday practice is a relatively new field of research in the field of audiology. Current data suggests their effectiveness in various areas related to hearing.

REFERENCE

- Asia Otolaryngol (Stockh), 2000; 135(2): 225-26, Organization of tinnitus management in Poland; Skarzynski P, Rogowski M, Borkowski D, Paluszynski T, Jaskolski J, 2017; 1-5, Adaptation of the Tinnitus handicap inventory into Polish and its testing on a clinical population of tinnitus sufferers; Skarzynski P, Rajkowski D, Rajkowski J, Pilsa A, Wodarczyk AW.
- Journal of Hearing Science & Vol. 2, No.2, May 2012; ISSN 2083-369X; 48-55, The Tinnitus Method used in the National Network of Teleaudiology: Assessment of Quality and cost effectiveness; Rogowski A, Skarzynski P, Lorens A, Chycka A, Wodarczyk A, Skarzynski P, Wodarczyk A, W. Brucki L.

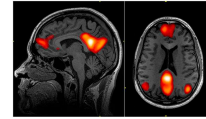
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Relief Validation Study #2 – In Progress, expected completion – late 2019.

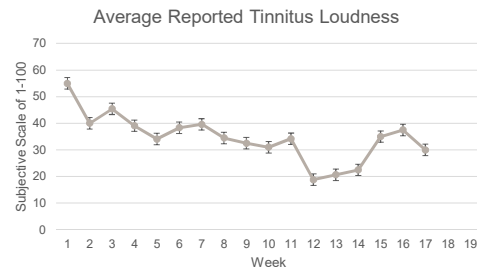
Working with a leading US university in auditory neurology on a study looking at the efficacy of using ReSound Relief as a management tool for tinnitus.



Study Design:

2 Groups: Relief/Control (not using Relief)

- Baseline THI, TFI and TPFQ; Baseline fMRI
- 6 months
- Post THI, TFI and TPFQ; Post fMRI
- First peer-reviewed study in the industry looking at **both** behavioral and neurological factors from an app-based management platform



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Why should a HCP promote ReSound Relief?

Tinnitus is often a difficult topic to address in the clinic. **ReSound Relief is designed to help HCPs overcome those difficulties**, by offering the most complete and flexible app toolset to help people manage their tinnitus.

Benefits for the HCP

- Best tool to introduce the patient to tinnitus and its therapies
- Can be used as a complimentary and supportive clinical tool for tinnitus management
- Personalization and guidance to take the next steps in their tinnitus management program
- Perfect tool for routine follow-up visits where HCP can review progress and fine-tune the program
- Great tool for remote location patients and when short on tinnitus consultation time

Additionally, ReSound Relief tracks app usage, so the HCP can use it to recommend routine follow-up visits where they can review the progress, fine tune the program and discuss further steps.



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ReSound Tinnitus Management Kit

What's Available:

- Tinnitus Workbook:
 - Patient's Guide to Tinnitus Management
- Tinnitus Handbook
- Interactive Counseling Flip Chart
- Fitting Guide
- Whitepapers
- Screening Tool
- Flowchart
- Questionnaires
- Counseling Animations
- ReSound Relief
- SoMe campaigns



GN Making Life Sound Better www.usa.gnresound.com
Items are available electronically and in print

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Thank you!

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