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- On a PC
  - Open PDF
  - Click Print
  - Choose # of pages per sheet from dropdown menu
  - Choose Black and White from “Color” dropdown
- On a Mac
  - Open PDF in Preview
  - Click File
  - Click Print
  - Click dropdown menu on the right “preview”
  - Click layout
- Choose # of pages per sheet from dropdown menu
- Checkmark Black & White if wanted.
- If more details needed please visit our FAQ page: <https://www.audiologyonline.com/help>

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- Switch to another browser
- Use a hardwired Internet connection
- Restart your computer/device

### Still having issues?

- Call 800-753-2160 (M-F, 8 AM-8 PM ET)
- Email [customerservice@AudiologyOnline.com](mailto:customerservice@AudiologyOnline.com)

## Luis F. Camacho, AuD, FAAA

Luis Camacho, AuD, began working for Starkey Hearing Technologies in August 2000 as a Field Sales Representative. In that role, he supported Indiana, Michigan, Ohio, Illinois and Kentucky. In 2009, he joined the Education & Training Department as part of the field-training team. Current duties include leading training classes for Starkey staff and customers, development of training materials and overseeing Starkey's Audiology Online and e-learning initiatives. In 1987, he received his BA in Telecommunications and Audio Engineering from Indiana University. He received his MA in Audiology from Indiana University in 1991. After graduate school, he worked as an audiologist for a neuro-otology practice in Indianapolis where his duties included clinical audiology, special testing, hearing aid dispensing, marketing and public relations. In October of 2013, he earned his AuD from A.T. Still University. Luis is married with three children and resides in Bloomington, Indiana.



# Health and Wellness via Connectivity

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**LUIS CAMACHO, Au.D.** MANAGER OF EDUCATION AND TRAINING



Hear better. Live better.

# EVERY 60 SECONDS



**18,100,000**  
Texts sent



**188,000,000**  
Emails sent



GOOGLE  
**4,497,420**  
Searches



NETFLIX  
**694,444**  
Streamed hours



YOUTUBE  
**4,500,000**  
Videos watched



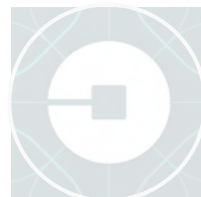
TWITTER  
**511,200**  
Tweets sent



SKYPE  
**231,840**  
Calls made



INSTAGRAM  
**277,777**  
Stories posted



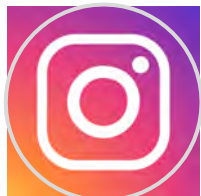
UBER  
**9,772**  
Rides given



GRUBHUB  
**8,683**  
Orders received



AIRBNB  
**1,389**  
Reservations



INSTAGRAM  
**55,140**  
Photos posted

# Wireless Terminology

## 2.4 GHz Bluetooth Low Energy (BTLE)

- Created for low power data transmission
- Excellent for connectivity between hearing aids and mobile devices (Apple & Android) and for communication with Thrive app
- **Not** designed for audio streaming

## Starkey Proprietary 2.4 GHz Protocol

- Utilized for connection to Starkey 2.4 GHz accessories (Remote Control, Remote Microphone +, etc.)





# Wireless Terminology

## 2.4 GHz Bluetooth Classic

- Designed to connect phones and other peripherals to each other
- Various protocols (e.g., HFP and A2DP) to stream audio
- Typically, quite power hungry
- Not designed for hearing aid use\*

*\*Bluetooth Classic is NOT used in Starkey hearing devices*





Bluetooth Low Energy  
allows us to have the best  
of both worlds – the ability  
to use a small cell battery  
and also stream for  
extended periods of time!





## Low Energy Audio (LEA)

- Apple's proprietary streaming protocol
- Allows direct streaming between Livio AI and Livio devices
- Works in conjunction with Bluetooth Low Energy for pairing and data sharing



## Android Streaming for Hearing Aids (ASHA)

- Proprietary streaming protocol from Android (Google)
- Allows direct streaming between select Android mobile devices\* and Livio AI and Livio
  - Google Pixel 3, Pixel 3 XL, Pixel 3a and Pixel 3a XL phones running Android 10 OS
  - A minimum of Android 10 OS

*\*A Remote Microphone Plus is still needed for streaming with other Android smart phone models*



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**The Best  
Hearing Aids**



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**Healthable  
Technologies**



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**Intelligent  
Assistant**

THE INDUSTRY'S FIRST AND ONLY

# Healthable Hearing Platform

**Thrive** — A Gateway to Better  
Hearing, Health and Wellness

Dual-Radio (2.4 GHz + NFMI)

Multi-Core Twin Compressors

Inertial Sensors

Artificial Intelligence







# Thrive Platform

**Dual Radio**  
2.4 GHz + NFM1





# Dual Radio

## 2.4 GHz + NFM1

### 2.4 GHz

- Range of about 30 feet with best performance within line of sight
- Direct connectivity to phones & Starkey 2.4 GHz accessories
- Excellent stereo sound quality
- Fast data transmission while maintaining low power consumption





# Patient-Focused 2.4 GHz Accessories

Connect simply and easily to smartphones,  
TVs, or media devices

Enhance communication in quiet  
or noisy environments



# Ultimate Control

# thrive

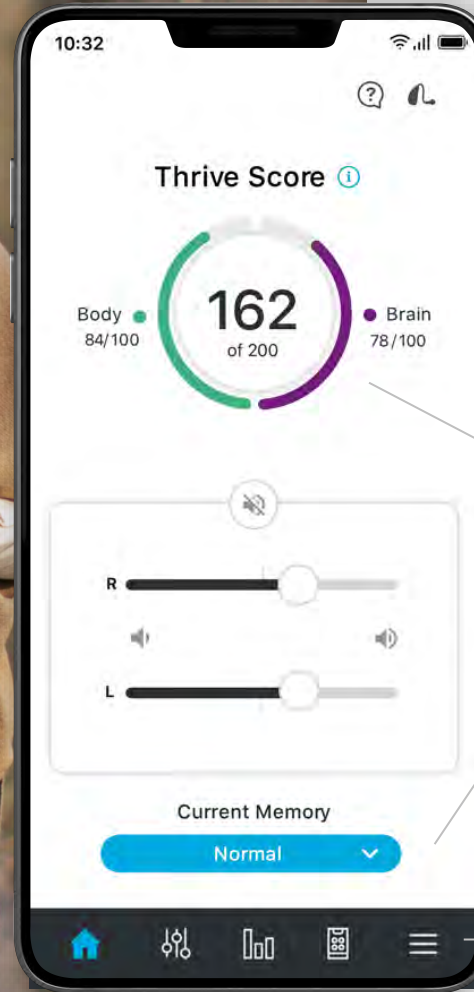
## Hearing Control App





# thrive

**The Industry's Best App,  
More Intuitive Than Ever**



Monitor **Body and Brain Score** totals

**Hearing Aid Memories**  
right at your fingertips

**New Navigation Bar**  
making it easy to find  
the features you need

# Home Screen

## Navigation Bar



Home



Customize



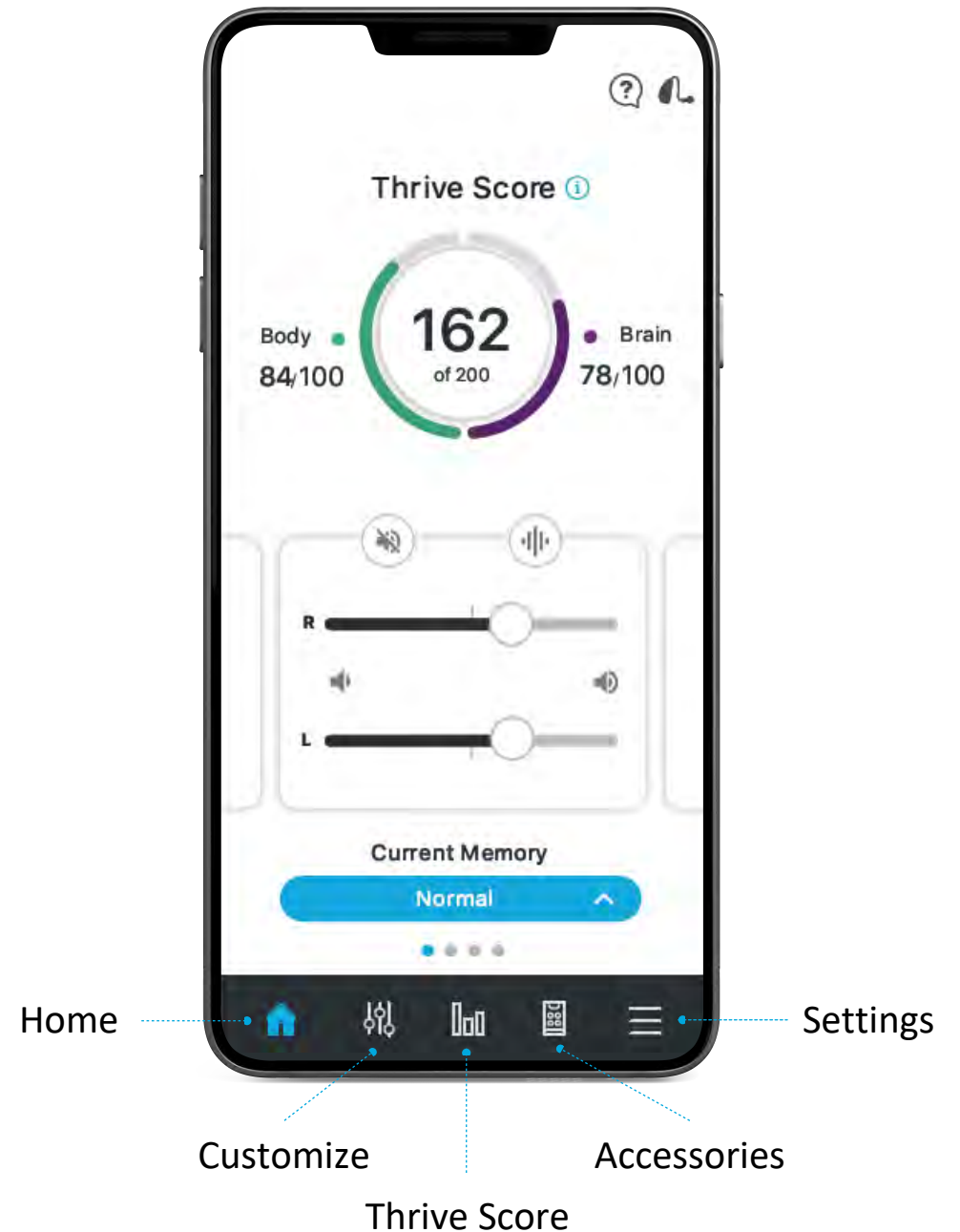
Thrive Score  
*(visible for AI products only)*



Accessories



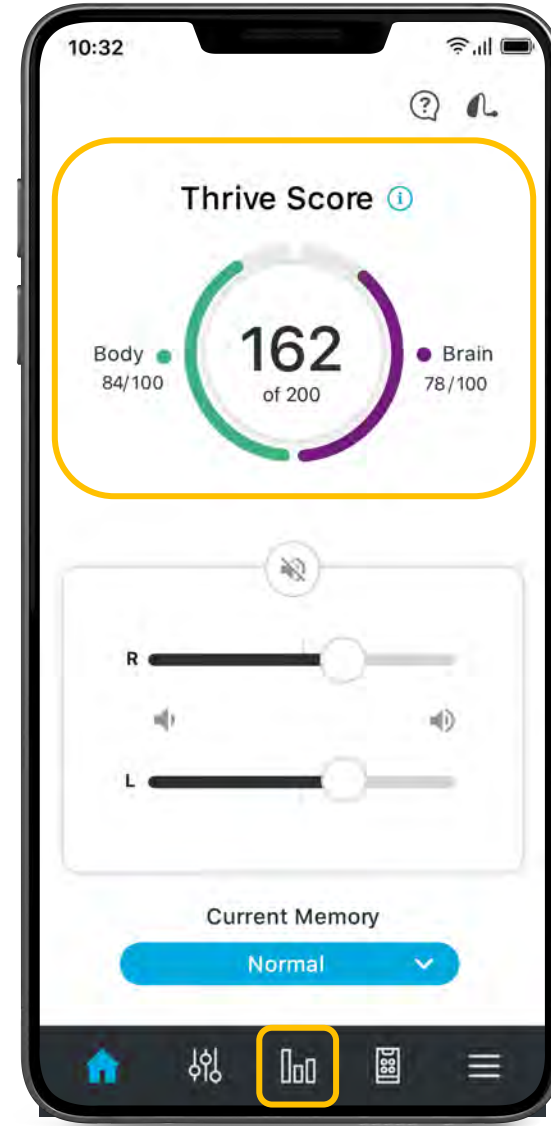
Settings



# Thrive Wellness Score

Provides the patient with a quick reference to see how they are progressing in meeting their daily Body and Brain Score goals

- Can tap on the Body or Brain text to access detailed information
- Can tap on the “data” icon to access detailed information





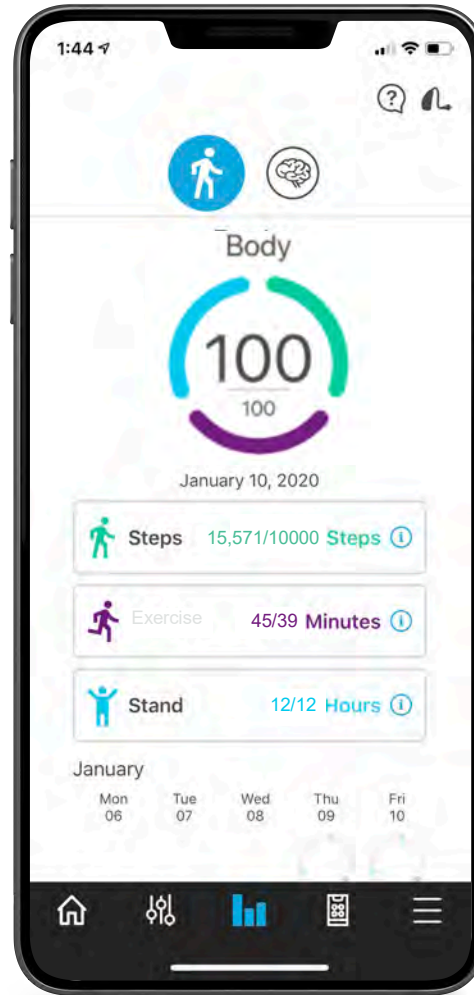


## Body Score

Steps

Exercise

Stand

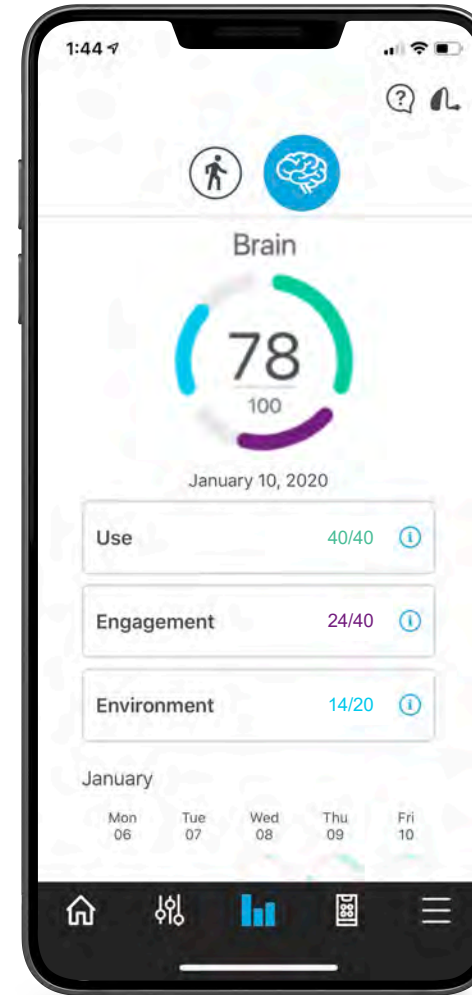


## Brain Score

Use

Engagement

Environment





## Body Score



### Steps

Steps per day



### Exercise

Minutes of exercise — brisk, walking pace, or faster



### Stand

Continuous movement for at least one minute in a one hour period



## Brain Score



### Use Time

12-hour wear time per day



### Engagement

Percentage of time in complex social listening situations, including streaming



### Environment

How varied are the listening environments

# Accessories

Icon will appear if at least one 2.4 GHz streaming accessory is paired to the hearing devices

- Remote Microphone +
- Mini Remote Microphone
- TV Streamer
- Table Mic



# Accessories

## USERS CAN

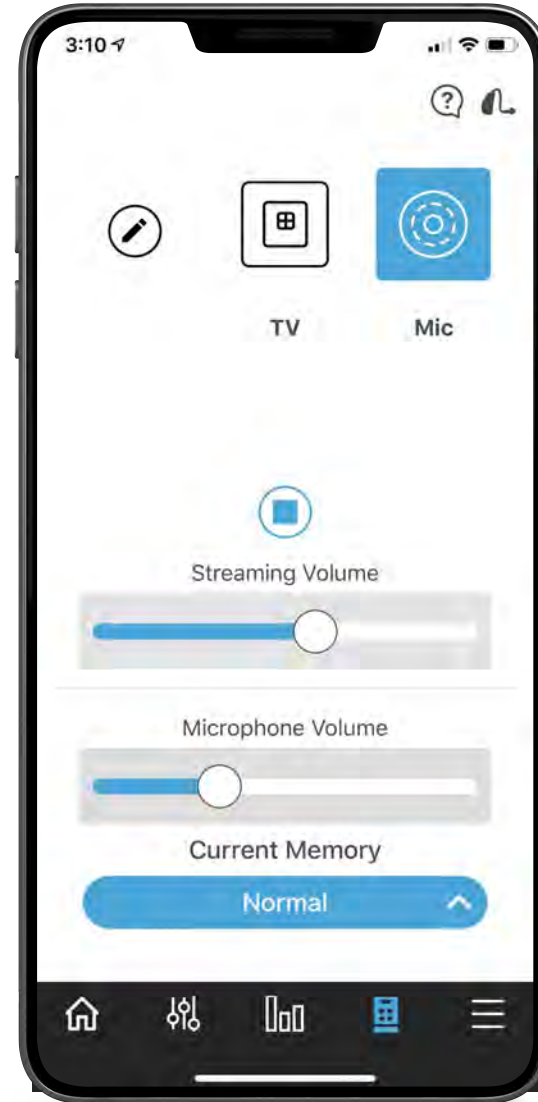
Choose which accessory to stream

Start/stop streaming

Independently adjust streaming volume  
and hearing aid microphone volume

Change memory

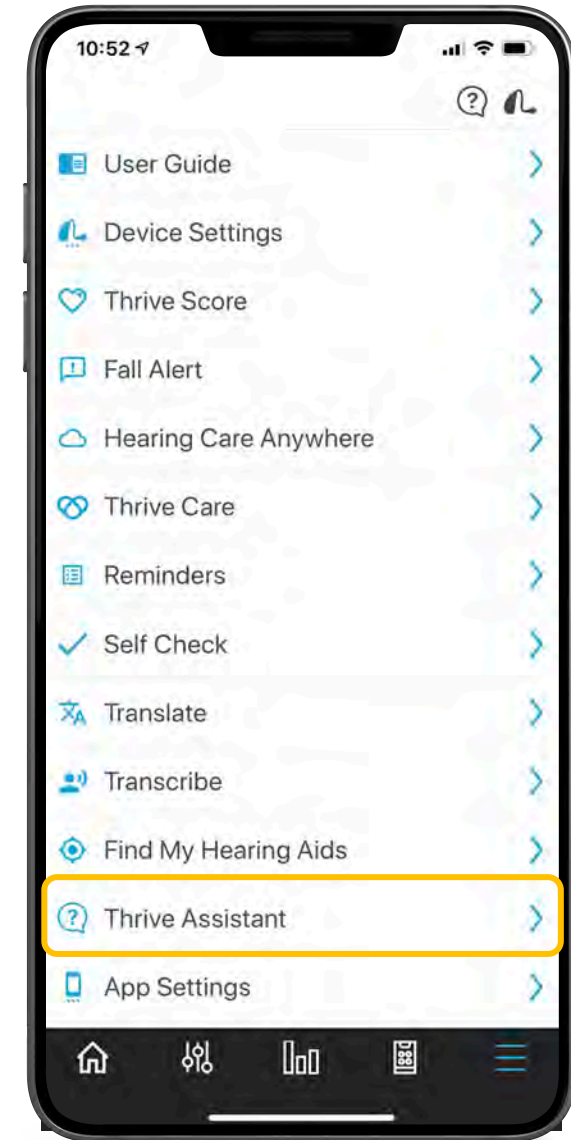
Name accessories  
(e.g. Living Room TV, Bedroom TV)



# Thrive Assistant

**Get quick answers to questions, troubleshoot hearing aid and accessory issues**

With Amazon log-in, get answers to non-hearing aid related questions such as weather updates, searches, etc.





THE INDUSTRY'S FIRST AND ONLY

# Voice-Activated Commands

Exclusive to Livio Edge AI

Control your hearing  
aids by simply speaking

Change my memory to **Outdoors**...





# Voice-Activated Commands

Exclusive to Livio Edge AI

## Control Your Hearing Aids

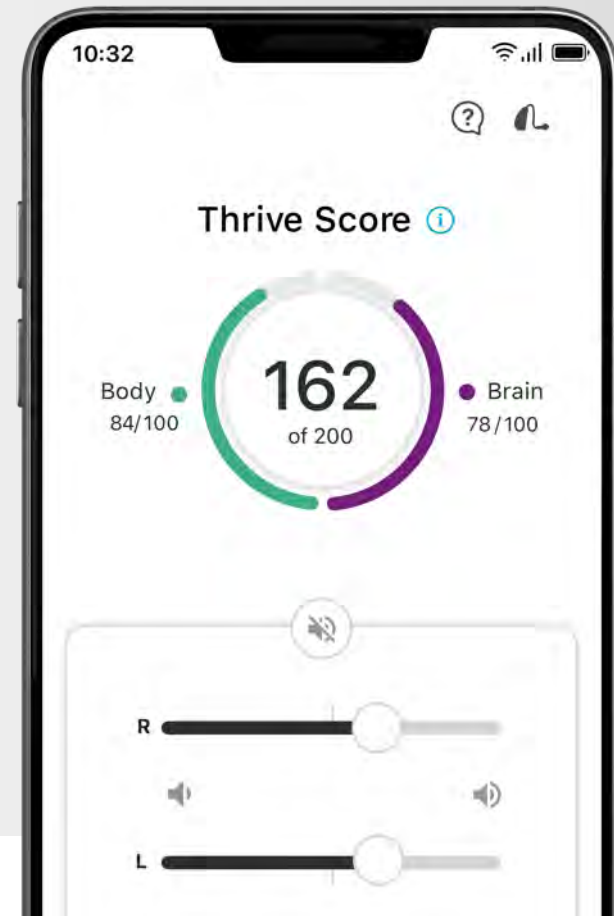
Increase Volume  
Decrease Volume  
Mute  
Change Memories

**Set a Reminder**



# thrive

Ultimate control app



# thrive

Ultimate control app

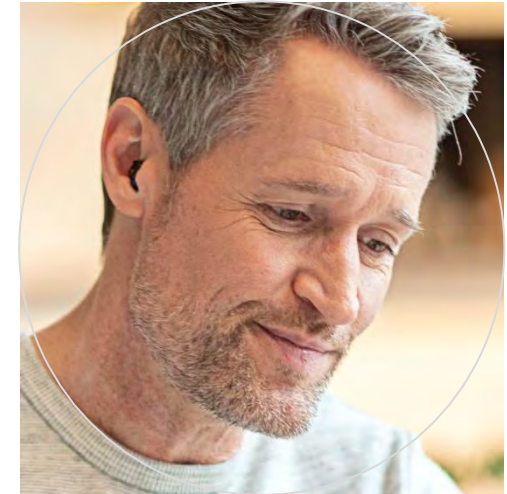


# thriveCare

Provide peace of mind

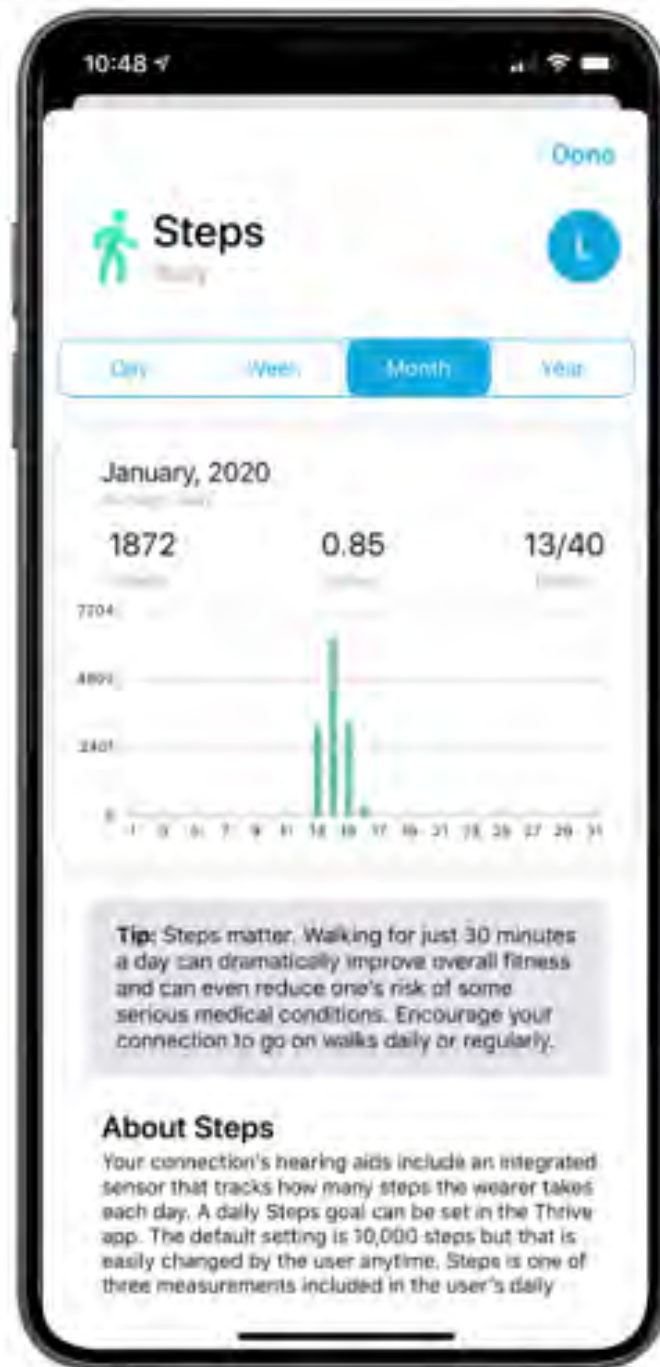
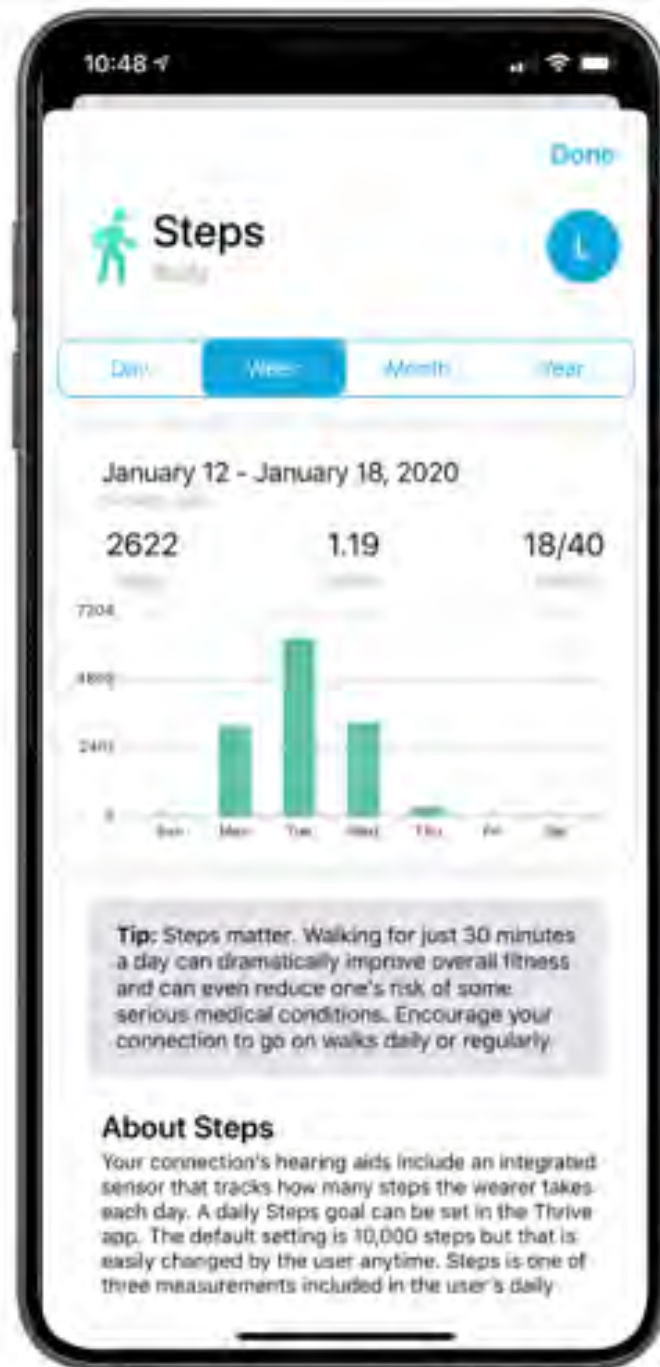


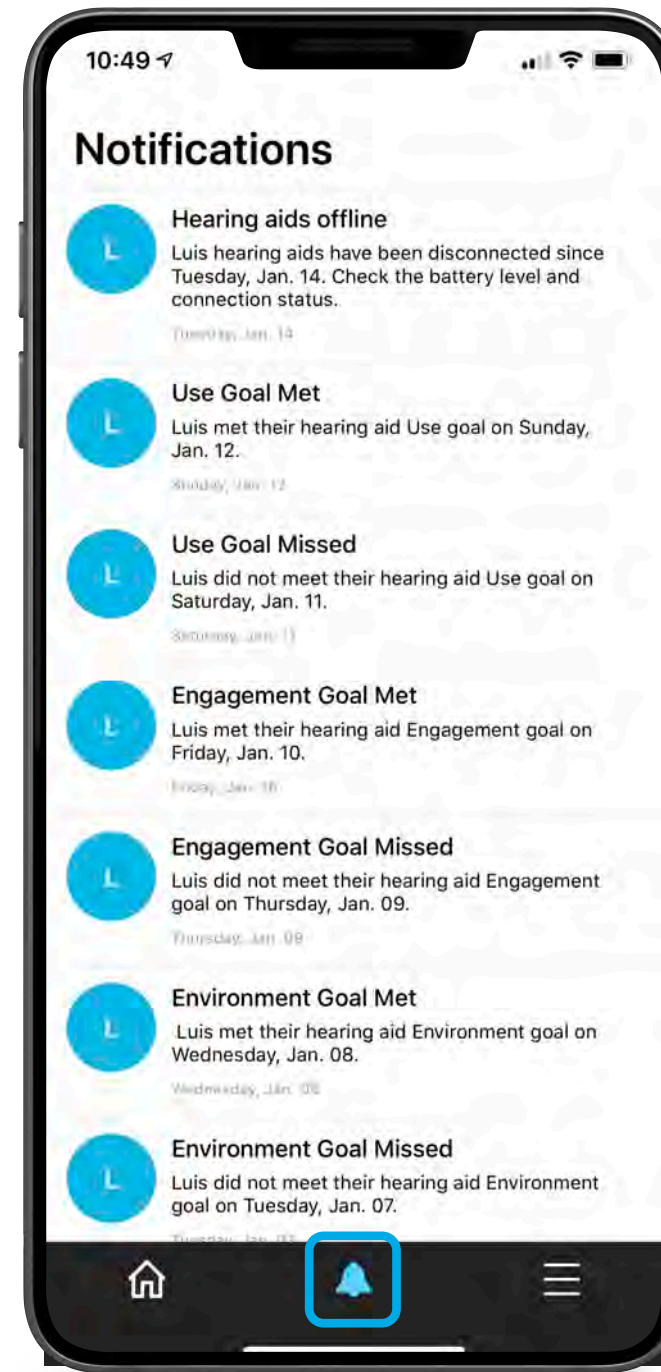
# Thrive Care Data



**CAREGIVER**







# thriveCare

Easy to use

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Supports safety  
and independence

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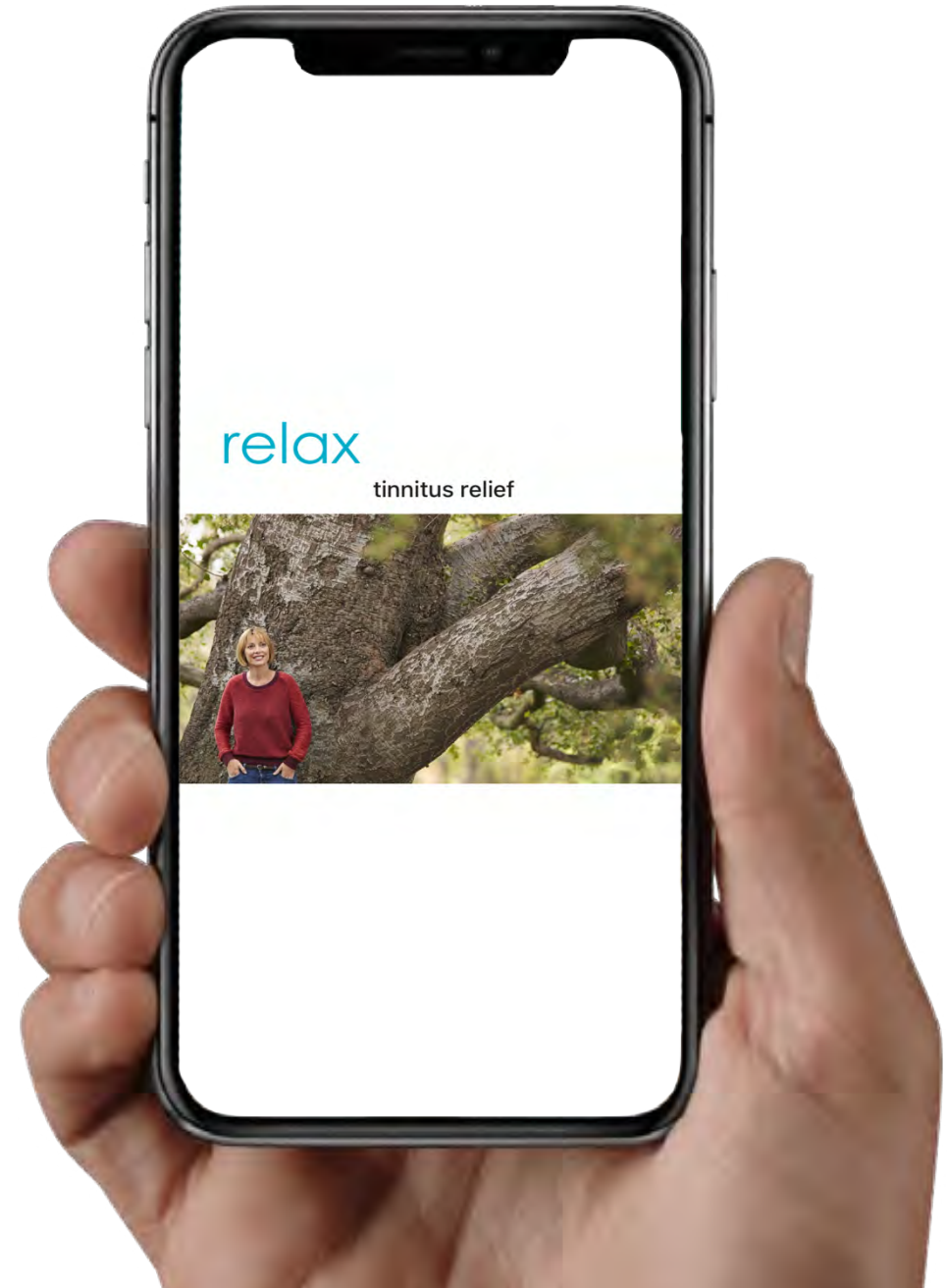
Secure & private



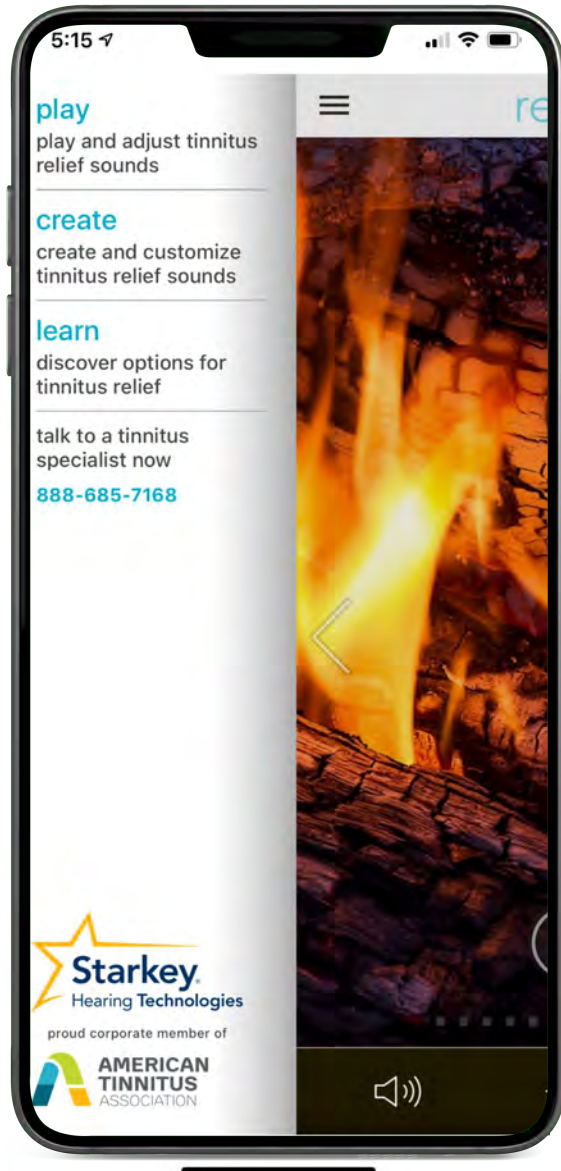


# Starkey Relax

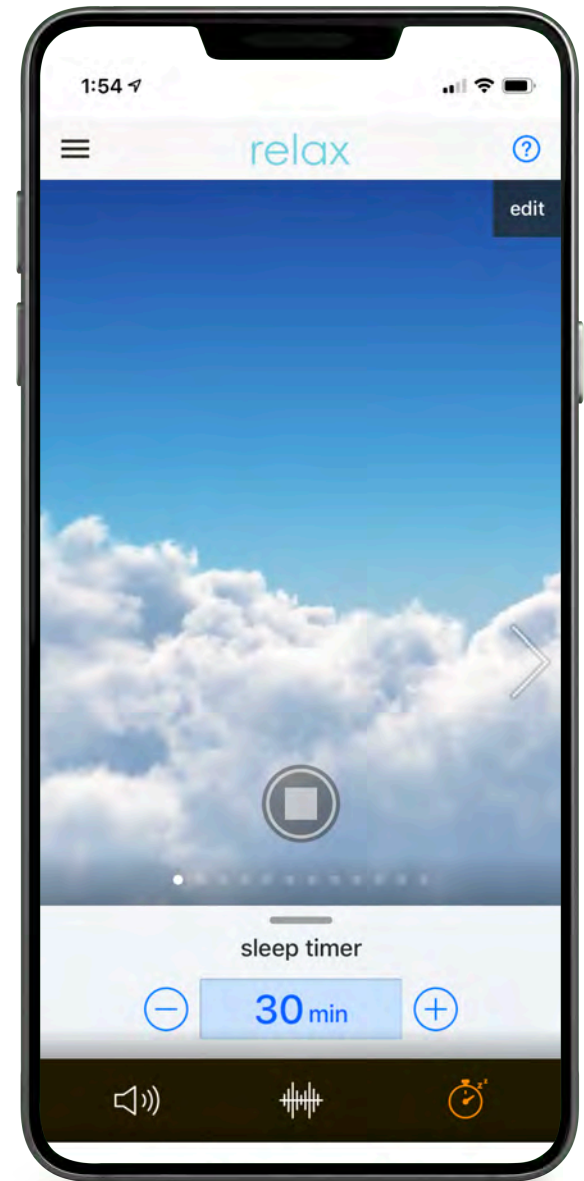
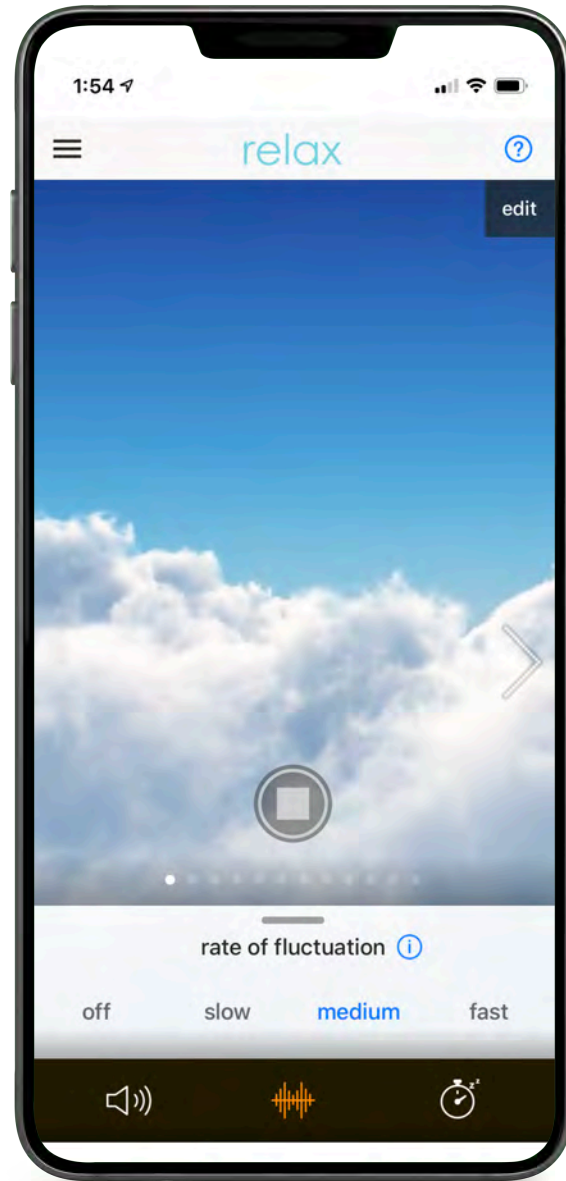
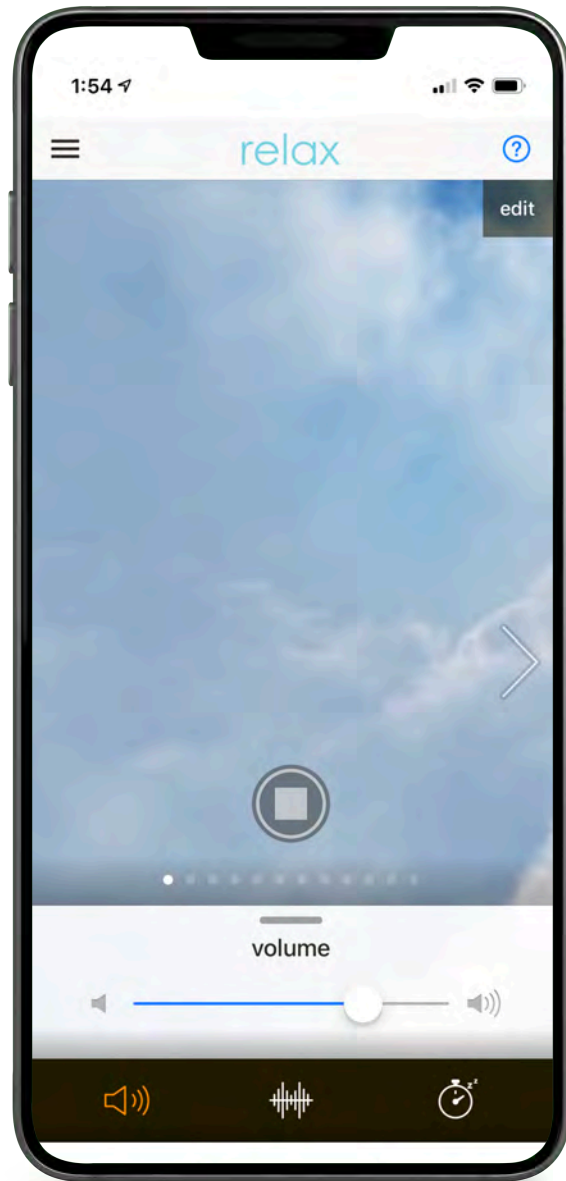
Relief sounds and education  
for those who have tinnitus







Easy to use app with a variety of sound stimuli and links to information from Starkey and American Tinnitus Association



12 different  
stimuli options





# Resources

[StarkeyPro.com](https://www.starkey.com)

Multiflex Tinnitus Pro QuickTIP

Multiflex Tinnitus Technology Handbook

Tinnitus Handicap Inventory Questionnaire

Tinnitus Consumer In Office Poster

Patient Education Brochure: Tinnitus

Tinnitus Technology Options Brochure

The collage features five distinct resources:

- Multiflex Tinnitus Technology Handbook:** A white booklet with a photo of a smiling couple. The title is in a serif font, and the author's name, Lindsay Prusick, Au.D., is at the bottom right.
- Tinnitus Handicap Inventory Questionnaire:** A white form titled "TINNITUS HANDICAP INVENTORY" with a patient name and date line. It includes instructions and 25 numbered questions with "Yes", "Sometimes", and "No" response options.
- Tinnitus Consumer In Office Poster:** A blue poster with the word "Tinnitus" in large white letters, followed by "Technology products for you and your loved ones". It shows a family playing on a beach.
- Patient Education Brochure: Tinnitus:** A white brochure with the Starkey logo at the top right. The title "Everything you need to know about TINNITUS" is prominent, accompanied by a blue bell icon. It contains sections on "What is it?", "Who gets it?", "How to get relief", "What it sounds like?", "How to prevent it?", "What causes it?", "Effects of tinnitus", and a "Learn more..." link.
- Tinnitus Technology Options Brochure:** A white brochure with the Starkey logo at the bottom right. It features a large blue bell icon and the text "Everything you need to know about TINNITUS".



# Tinnitus Handicap Inventory (THI)

Newman, C. Jacobson, G. Spitzer, J.

Brief, easy to administer and reliable measure of the impact of tinnitus on daily living

Self-report measure consisting of 25 questions

3 subgroups: functional, emotional and catastrophic

Pre-fitting to assess the impact of tinnitus on daily living

Post-fitting outcome measure to monitor progress

1. Because of your tinnitus, is it difficult for you to concentrate?	Yes	Sometimes	No
2. Does the loudness of your tinnitus make it difficult for you to hear people?	Yes	Sometimes	No
3. Does your tinnitus make you angry?	Yes	Sometimes	No
4. Does your tinnitus make you feel confused?	Yes	Sometimes	No
5. Because of your tinnitus, do you feel desperate?	Yes	Sometimes	No
6. Do you complain a great deal about your tinnitus?	Yes	Sometimes	No

## TINNITUS HANDICAP INVENTORY SEVERITY SCALE

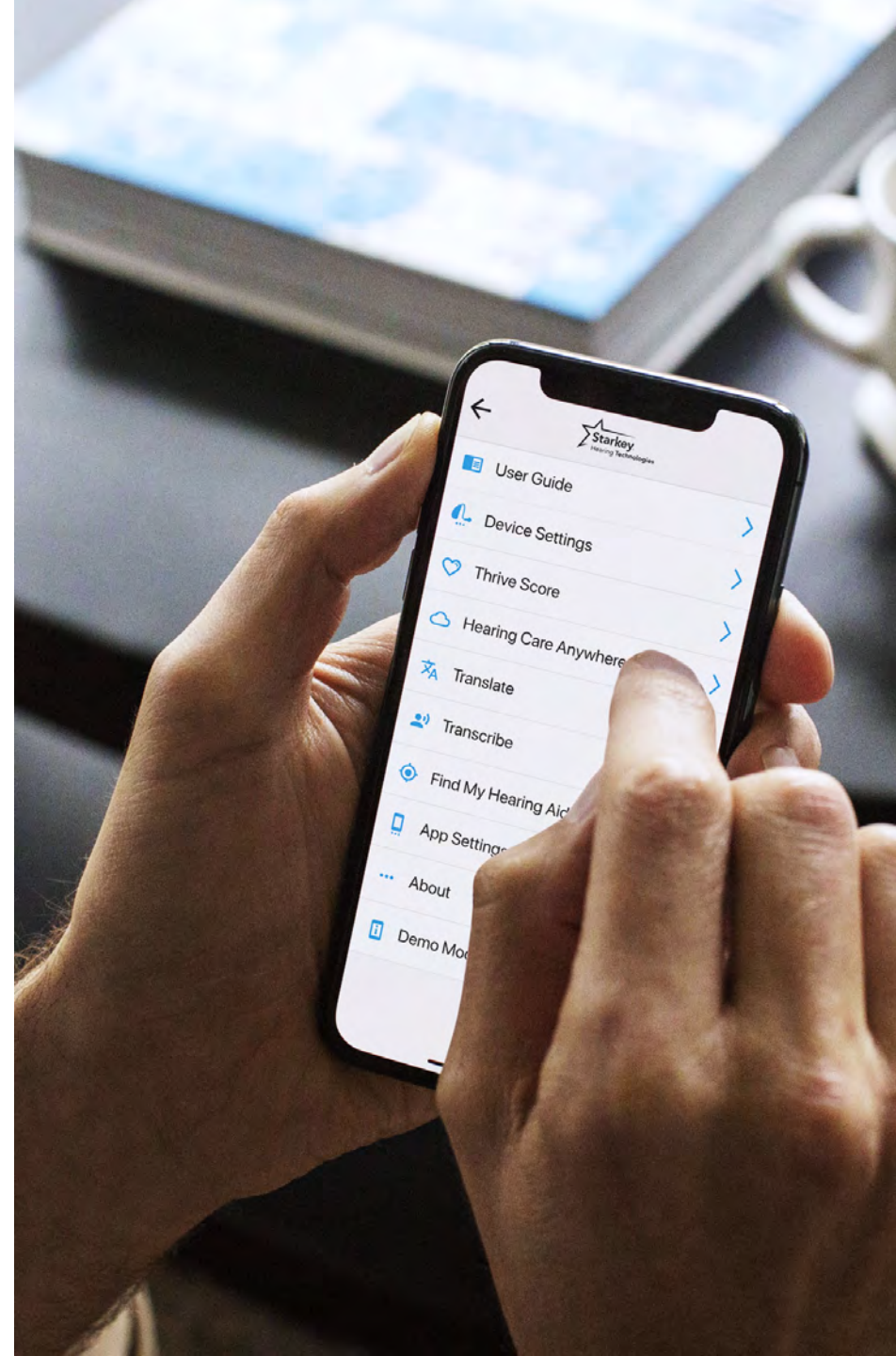
GRADE	SCORE	DESCRIPTION
1	0-16	Slight: Only heard in quiet environment, very easily masked. No interference with sleep or daily activities.
2	18-36	Mild: Easily masked by environmental sounds and easily forgotten with activities. May occasionally interfere with sleep but not daily activities.
3	38-56	Moderate: May be noticed, even in the presence of background or environmental noise, although daily activities may still be performed.
4	58-76	Severe: Almost always heard, rarely, if ever, masked. Leads to disturbed sleep pattern and can interfere with ability to carry out normal daily activities. Quiet activities affected adversely.
5	78-100	Catastrophic: Always heard, disturbed sleep patterns, difficulty with any activity.

# Hearing Care Anywhere

Telehealth application for remote  
hearing aid programming adjustments

livioEdge<sup>AI</sup> | livio<sup>AI</sup> | livio

All Technology Tiers  
iOS and Android Compatible



# FaceTime

Real-time

## LIVE SESSIONS

Requires an appointment

Provides real-time audio and visual engagement

Multiple needs may be addressed at one time

Reimbursement

Required by some organizations



VS.

# Facebook

Store and Forward

## REMOTE ADJUSTMENTS

Does not require an appointment

Shorter wait times

Compare current and new settings in applicable environments

Collaboration with colleagues or students prior to making adjustments

Concurrent video or phone call is possible



# Hearing Care Anywhere

## REMOTE ADJUSTMENTS

### **Asynchronous Strategy**

- No appointment
- Shorter wait times
- Compare current and new settings in applicable environments
- Collaboration with colleagues or students

## LIVE SESSIONS

### **Synchronous Strategy**

- Requires an appointment
- Real-time audio and visual engagement
- Counseling opportunities
- Reimbursement considerations
- Required by some organizations





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**The Best  
Hearing Aids**



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**Healthable  
Technologies**



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**Intelligent  
Assistant**

# Thank You



Hear better. Live better.