Applying ReSound Tinnitus Solutions
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Learning Objectives:

• Participants will be able to demonstrate programming of ReSound’s Tinnitus Sound Generator (TSG) feature, using compatible products, within Smart Fit software

• Participants will be able to compare and contrast uses of TSG, uses of ReSound Relief app, and uses of ReSound supplementary educational materials

• Participants will be able to navigate and explain the TSG adjustment screens in the ReSound Smart 3D app
NOT Objectives:

• Instructor will not be all-knowing about tinnitus treatment and sound therapy theory
• Participants will NOT be tinnitus treatment experts
• Participants will NOT all agree on the best way to treat tinnitus
• Participants will NOT find the cure to tinnitus

What is Tinnitus?

• Tinnitus is an involuntary sound perception originating inside the head
• May be perceived in one or both ears, or unlocalized
• Constant or intermittent
• Usually subjective
• Described as: ringing, buzzing, hissing, roaring, chirping, seashell, other
• A symptom, not a disease

• So… what is tinnitus therapy and who does it
Breaking the vicious cycle

Who here does tinnitus treatment?

Applying ReSound Tinnitus Solutions

These case studies illustrate patients’ issues with tinnitus and personalized ReSound solutions.

Mr. Jackson  Mrs. Hart  Mr. Guy
Mr. Jackson

- 40 year old attorney, junior associate
- Mild notched SNHL in both ears
- Has played in a band for 20 years
- Tinnitus is his primary concern
- Tinnitus x several years
- No medications
- Has never worn hearing aids
- Gradually noticing difficulty hearing
  - Courtroom
  - Board meetings
  - Telephone

Questions for Mr. Jackson
Answers from Mr. Jackson

Describe your tinnitus.
"The best I can describe it is 'ringing.' It's there most of the time, and sometimes it seems louder than others. The courtroom seems to be where my tinnitus goes crazy, gets louder, surges… especially during high stress cases."

Tell me more about your courtroom difficulties.
"I feel like the witnesses get intimidated or nervous and then talk more softly… mumbly."

Tell me more about your board meeting difficulties.
"I feel like the ringing makes it so I can’t understand the people at the other end of the boardroom table sometimes."

What do you do for your ears while playing in the band?
"I’ve been thinking about musicians’ earplugs like my drummer has."

What kind of phone do you have?
"I have an iPhone 7 and it’s my lifeline. I use it to manage my schedule, my tasks, reminders, conference calls, grocery lists, focus groups, twitter, facebook, pet-cam, household electronics…"

Mr. Jackson

Fit with LiNX 3D 761 RIEs in both ears
TSG enabled in program 2
TSG settings:
43 dB SPL
HI Microphone ON
Sound preset = White noise
Amplitude modulations = OFF
Volume Control = Volume Control, -12/+6
HI settings:
Program 1 = All-Around, defaults
No phone settings, damaged iPhone
Wants to pair iPhone at next visit
Mr. Jackson: 3-week follow-up visit

Tinnitus still just as bothersome when using hearing aids, even when volume turned to max.
TSG helps some, but he is tired of listening to the same “droning” sound.
His tinnitus always gets worse (louder) when he is in the courtroom.
He continues to struggle hearing on his phone.
Some days he likes to just listen to music, rather than listening to the TSG but doesn’t want to bother others or draw attention.
Tinnitus is now noticeably worse when he removes hearing aids to go to bed.

How can Smart Fit help?

- Activate modulation within TSG
- Reduce max volume
- Consider dB SPL adjustment
Beyond Smart Fit

Pair iPhone for direct streaming and app use

Beyond Smart Fit

Download Smart 3D app to allow for TSG adjustments in courtroom
Beyond Smart Fit

Show him how to adjust for sound quality when streaming music
Beyond Smart Fit

Download Relief app for streaming while aided OR playing while unaided

Pair iPhone for direct streaming and app use

Download Smart 3D app, and adjust programming for courtroom

Show him how to adjust for sound quality when streaming music

Download Relief app for streaming while aided OR playing while unaided

Other suggestions?
  Multi Mic for board room, court room?
  Musician earplugs
Mrs. Hart

• January 2017: received call from Mr. Hart, not a current patient
• Upset because his wife, also not a current patient, had been re-admitted to psychiatric ward
• Being treated for chronic tinnitus, depression, generalized anxiety and suicidal tendencies

Mrs. Hart – History

• May 2015: tinnitus after cleaning ears with a water bulb system and cotton swabs.
• July 2015: purposely overdosed because of “high pitched ringing”, admitted for 5 days
• Tinnitus subsided, back to “old self”
• October 2016: Emotional distress from mother’s illness and increased workload
• Placed on Zoloft, Wellbutrin, Seraquil
• Resulting feelings: jittery, withdrawn, anxious, sleepless
• January 2017: no longer able to cope with tinnitus, readmitted
Mrs. Hart

- March 2017: Discussion and counseling with husband on initial phone call
- Sent tinnitus brochure to him
- Scheduled a consultation for after discharge

Mrs. Hart

- Seen after discharge
- “Crickets”
- “Swirling sand crystals”
- Fluctuating loudness from one day to the next
- Slight to mild SNHL
- Excellent word recognition
- Recommended a medication review with neuro-otologist at next week’s visit
Mrs. Hart

- May 2017: Returned, still on same meds
- Remained bothered by tinnitus
- Demoed LiNX 3D 961 RIEs in both ears
- TSG activated with no Hi mic active
- Immediate relief
- Ordered her own pair!

Mrs. Hart

- June 2017: Fit with hearing aids
- TSG set to white noise
- Modified low freq filter for sound quality
- Added modulation per her preference
- Enabled TSG volume control + environmental steering due to daily differences
Mrs. Hart – 4 days later

- 4 days later: Emotional phone call from Mr. Hart
- Back to work
- Tinnitus is manageable
- Has ceased all medications
- 3 months later: Uses TSG daily and nightly
- Sleeping well
- Has “no problem” with tinnitus

Other materials to enhance tinnitus education

Tinnitus Education Flipchart
Patient’s Guide to Tinnitus Management
Tinnitus Screening Tool
Tinnitus Management Workbook
Mr. Guy

Wearing ENZO 3D 588s in both ears
Programmed with Nature Sounds
Using Smart 3D app

Mr. Guy – 2 week follow up

Loves hearing aids, iPhone streaming, and Smart 3D app
Can’t find Nature Sounds on the Smart 3D app in order to switch between them
Wishes Relief app had some musical sounds to incorporate
Tinnitus is even worse when he takes hearing aids out and tries to sleep at night
Mr. Guy – 2 week follow up

Questions:

Show me the problems on your Smart 3D app

Show me the choices you see on the Relief app

What do you do to help you sleep?
Mr. Guy – 2 week follow up

**Questions:**
Show me the choices you see on the Relief app

![Relief app screenshot](image)

Mr. Guy – 2 week follow up

**Questions:**
What do you do to help you sleep?

![Relief app screenshot](image)
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Thank you!
What have you learned today?

Mr. Jackson  Mrs. Hart  Mr. Guy

Any questions?
Thank you!

GN Making Life Sound Better