



Welcome!

Judy Grobstein, AuD-FAAA, MACAud
Manager of Education and Audiology

Best option for audio is to call in using
Phone Number: 02 8518 1923 Access Code: 802 708 089
For technical questions or log-in information please contact Dan Towns
Direct line: 02 8823 9005 Dan_towns@starkey.com.au





Housekeeping


Webinar Experience

If not using speakers and you haven't already, please call into the call center number 02 8518 1923 and enter access code 802 708 089

Please be sure to keep microphones muted

If you have any questions, please type them in the chat box. You can view the chat box by clicking the chat bubble at the bottom of your screen 

If you have any technical issues, please contact Dan Towns at Dan_towns@starkey.com.au or call him direct at 02 8823 9005



Housekeeping


Endorsed Session

This Session is endorsed for ACAud, AudA and HAASA points

You must stay logged on for the full session

AudA members must complete a 10 questions quiz with a passing score of 70% as well as your CPD Reflections and Evaluations


ACAud, HAASA and NZAS members must complete the quiz to receive full points.



Housekeeping

Learning Objectives

- Identify causes and/or triggers of tinnitus
- Identify patient populations likely to experience tinnitus
- List 5 steps for successful management of tinnitus




Strategies for Successful Tinnitus Management

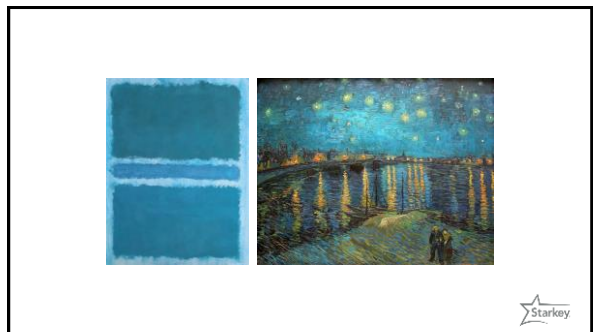
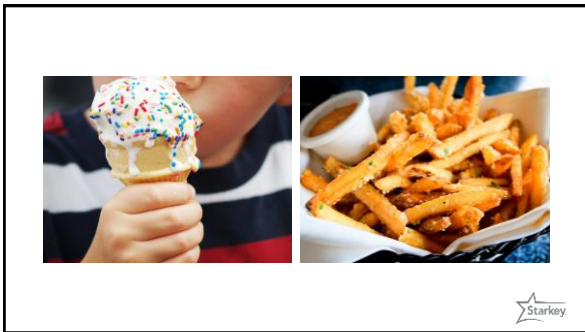
Judy Grobstein, AuD-FAAA, MACAud
Manager of Education and Audiology




Agenda

- Defining Tinnitus
- Causes & Triggers
- Tinnitus Populations
- 5 Steps to Successful Management






THE SENSES

Sight Touch Hearing Taste Smell

Starkey





tin·ni·tus
 ["TIN-it-us", "tin-NITE-us"]
noun Pathology
 a constant or intermittent sound heard in the ears and/or head that does not have an outside source, often described as ringing, humming, or buzzing




NOT imagined
NOT a disease
Symptom of a malfunction, occurring anywhere within the hearing system




Causes
Ear? Brain? Both? Other?
 Many models and theories:
 • Peripheral
 • Central
 • Psychological
 • Non-auditory contributions









Causes
The exact physiological mechanism of tinnitus is unknown.
 BUT, research has consistently shown there are several likely causes or triggers.




Causes

Folmer & Scriver, 2003; Hoffman & Bond, 2006; Reguly et al., 2013; Baumann, 2013

 Health Problems	 Noise Trauma	 Hearing Loss
	 Head & Neck Injury	 Medications

Causes
Noise Trauma

- Single traumatic experience or repeated exposure over time
- Tinnitus often first indicator of over exposure
- Onset may be sudden or gradual



Causes

Hearing Loss

Almost any form or disorder involving the outer, middle, or inner ear or the auditory nerve may be associated with tinnitus



Brummett 1980; Shea, 1981



Tinnitus is more prevalent among individuals with impaired hearing than it is among the normal hearing population.

Davis & Amr Rafea, 2000



Tinnitus & Hearing Loss

- Can occur with any:
 - degree of hearing loss
 - type of hearing loss
 - cause or type of onset
- Changes in hearing loss and changes in tinnitus tend to occur independently of one another



Causes

Disease & Health Problems

Association between a number of conditions and tinnitus, including:

- Cardiovascular Disease
- Hypo/Hyperthyroidism
- Diabetes
- Hypertension
- Depression
- Fibromyalgia



Causes

Disease & Health Problems

Association between a number of conditions and tinnitus, including:

- Cardiovascular Disease
- Hypo/Hyperthyroidism
- Diabetes
- Hypertension
- Depression
- Fibromyalgia

Medications

500+ prescription and OTC drugs, supplements associated with tinnitus:

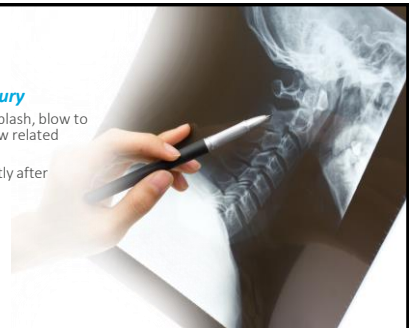
- Antibiotics
- Painkillers
- Cancer drugs
- Diuretics



Causes





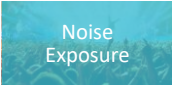

Head & Neck Injury

- Skull fracture, whiplash, blow to face/head, TMJ/jaw related problems
- Report onset shortly after injury/trauma



Aggravators

Forner et al., 2006; Henry et al., 2010

 Caffeine	 Alcohol
 High Doses of Aspirin	 Salt
 Noise Exposure	 Stress/Anxiety

30% of Adults


have experienced tinnitus

Who Experiences Tinnitus?

People from all walks of life - but certain groups are more susceptible


- Men (especially in professions that expose them to noise)
- Senior Citizens
- Caucasians
- People with certain common health problems

(Brown SC, 1990; Coles R, 2000)




Other At Risk Populations

- Veterans and military personnel
- Workers in loud environments
- Musicians and music lovers
- Motorsports and hunting enthusiasts




What is the impact?

Well-Being
Sleep
Concentration
Hearing



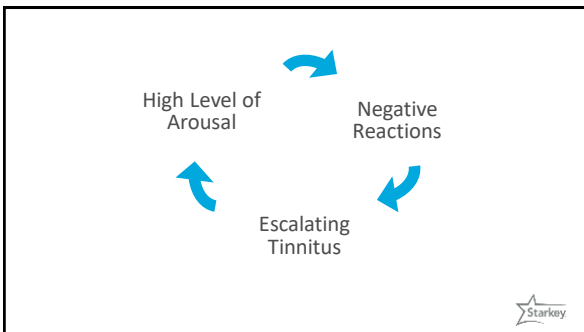
Why Are Some More Bothered Than Others?

- Research shows that there is no difference in psychoacoustic characterization of tinnitus when comparing groups of people who experience tinnitus and those who suffer from it.
- The REACTION to tinnitus creates the distress, not the tinnitus itself.



Reaction #1

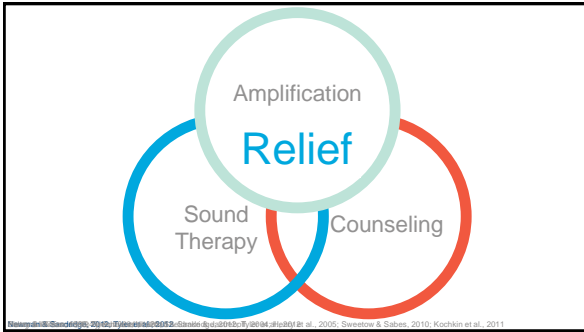
Reaction #2



Make it
STOP!

“The problem with Tinnitus, is that because there is still no cure, people are told they just have to live with it. Most of them do, but that doesn’t mean they like it.”
- Dr. Richard Tyler

There is no cure
But it can be managed



Steps for Success

1. Tinnitus Evaluation
2. Counseling & Education
3. Treatment Plan
4. Fitting Multiflex Tinnitus Technology
5. Follow-up Care

Tinnitus Evaluation

- Case History
- Otologic
- Medical
- Audiologic
- Lifestyle
- Subjective experience
- Previous treatments

Tinnitus Evaluation

How long have you had your tinnitus?

What does your tinnitus sound like?

When did you first experience your tinnitus?

Tinnitus Evaluation

Tinnitus Questionnaire(s)

- Identify problems or specific areas of a patient's life that are affected by tinnitus
- Quantify the magnitude of impact
- Monitor a patient's progress with a particular treatment
- Counseling tool


Tinnitus Evaluation

- Case History
- Tinnitus Questionnaire(s)
- Audiologic Testing
 - Otoscopy
 - Acoustic Immittance
 - Pure-Tone Audiometry
 - MCL & UCL
 - Speech Recognition Threshold
 - Speech Discrimination Scores

Steps for Success

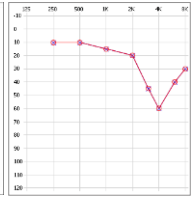

1. Tinnitus Evaluation
2. Counseling & Education
3. Treatment Plan
4. Fitting Multiflex Tinnitus Technology
5. Follow-up Care





Counseling and Education


Review all test results:

Counseling and Education


Provide information:

- How the hearing system works
- What is tinnitus
- Why hearing loss and tinnitus are often linked
- Prevalence of tinnitus
- Common known triggers
- Known aggravators
- Treatment is available






Counseling and Education

You don't have to be a "trained counselor" to provide effective counseling...listening to the patient and addressing his/her concerns and questions is considered counseling!

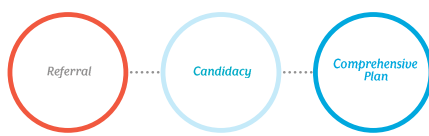



Steps for Success

1. Tinnitus Evaluation
2. Counseling & Education
3. Treatment Plan
4. Fitting Multiflex Tinnitus Technology
5. Follow-up Care







Treatment Plan

Emergency Referral


- Physical trauma
- Facial palsy
- Sudden hearing loss

Emergency Referral



- Patient who demonstrates any of the following:
 - Suicidal ideation
 - Or if you are concerned about the patient's well-being

It is not within the scope of practice for a hearing healthcare provider to treat mental health issues.




Urgent Referral

- Pulsatile tinnitus
- Unilateral tinnitus
- Ear pain and/or drainage
- Symptoms related to head or neck movement
- Vestibular symptoms (dizziness/vertigo)

Treatment Options

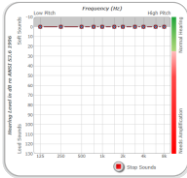

- Medical*
- Alternative*
- Amplification*
- Sound Therapy*
- Counseling*



Treatment Plan

Normal Hearing + Tinnitus

- Counseling
- Sound therapy
- Follow-up care

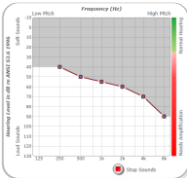




Treatment Plan

Hearing Loss + Tinnitus

- Counseling
- Hearing aid + sound therapy
- Follow-up care

≤ 70dBHL (at least 1 threshold below 4000Hz)

Treatment Plan

Hearing Loss + Tinnitus

- Counseling
- Hearing aid
- Sound therapy - external
- Follow-up care

> 70dBHL at all frequencies

Treatment Plan

Unsure Of Device Candidacy?

- Tinnitus questionnaire(s)
- Sleep, concentration, hearing, emotional well-being
- Motivation level

Compare and Contrast

“On a scale of 1-10, how noticeable is your tinnitus?”

- Hearing aid turned off but on the ear
- Hearing aid only
- Hearing aid + sound therapy stimulus
- Sound therapy stimulus only

Steps for Success

1. Tinnitus Evaluation
2. Counseling & Education
3. Treatment Plan
4. Fitting Multiflex Tinnitus Technology
5. Follow-up Care

MULTIFLEX Tinnitus Technology

Flexible. Personal Relief

livio^{AI}

2400 | with Healthable Technology

livio

2400, 2000, 1600, 1200


RIC 312
CROS System

Micro RIC 312
No NFMl

RIC R
Heart Rate Sensor compatible
Telecoil
CROS System

BTE 13
130/70 matrix
Telecoil
CROS System

●●●●● Snap Fit Smart Receiver Matrix Options: 107/40, 115/50, 120/60, 130/70



Custom Hearing Aids


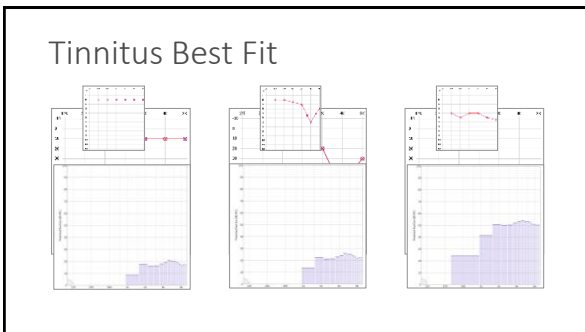
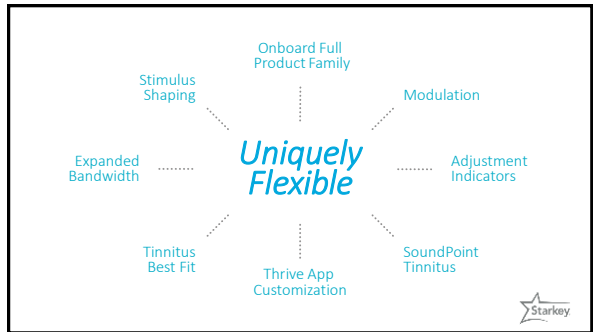
The Art and Science of Better Hearing

- 900sync Wireless Technology
- SurfLink Accessories
- Sound Enhancement features
- Ear to Ear User Controls
- Ear to Ear Phone
- Tinnitus Technology
- Telecoils available (ITE, ITC only)
- Up to 130/70 matrix

Muse iQ SoundLens iQ
(Synchrony)

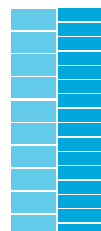
2400* | 2000 | 1600 | 1200 | 1000

*SoundLens available only in the Premium 2400 tier in wireless version and down to 1200 in wired version


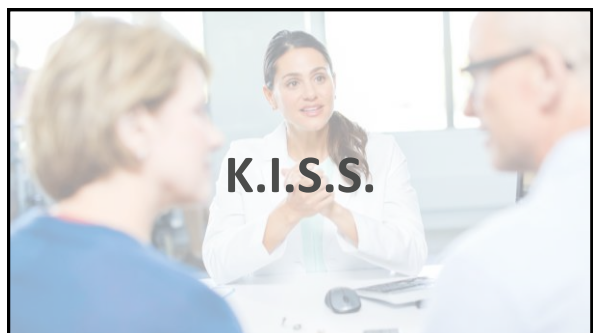
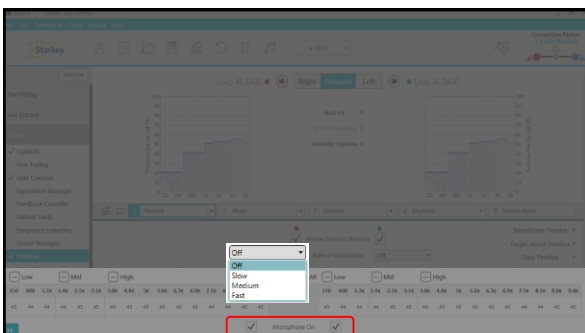
STIMULUS SHAPING

10 kHz bandwidth
for tinnitus stimulus*



16 bands
of adjustability*

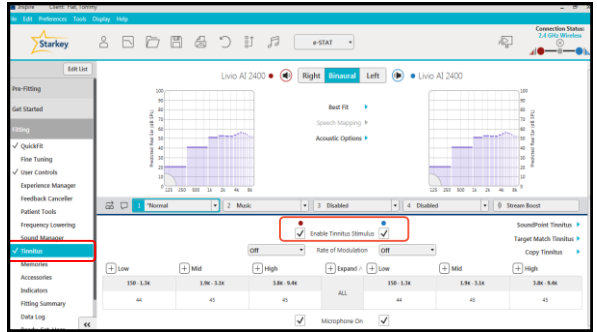
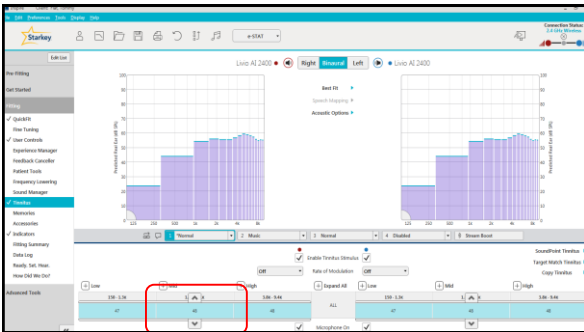
*available in technology tiers 1600 and above

Fitting Multiflex Tinnitus

Keep the first fit SIMPLE!


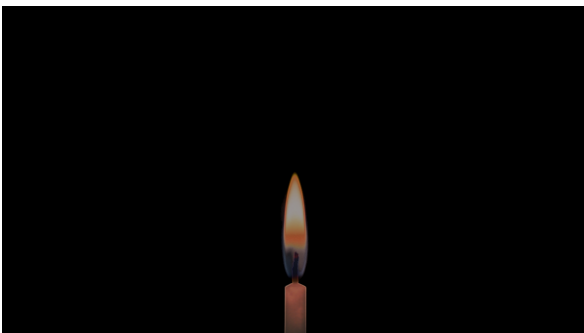
- Limit programming
 - Best Fit>Enable Stimulus>Ensure Comfort/Audibility

Fitting Multiflex Tinnitus

Stimulus: How Loud?

- Complete masking
- Partial masking
- Level that facilitates habituation


Fitting Multiflex Tinnitus

Keep the first fit SIMPLE!


- Limit programming
 - Best Fit>Enable Stimulus>Ensure Comfort/Audibility
- Counsel on care
- Counsel on adjustability in the Thrive app
- Discuss acclimatization
- Schedule a 1-2 week follow-up appointment



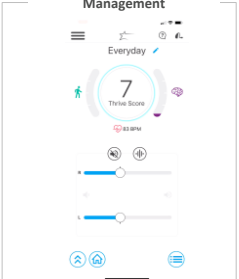

Thrive Hearing Control App




- Control & personalization of Livio AI and Livio technology
- Thrive Wellness Score with Livio AI
- Control of 2.4 GHz Accessories
- Control of Multiflex Tinnitus stimulus



Successful Tinnitus Management





Fitting Multiflex Tinnitus



At follow-up appointments

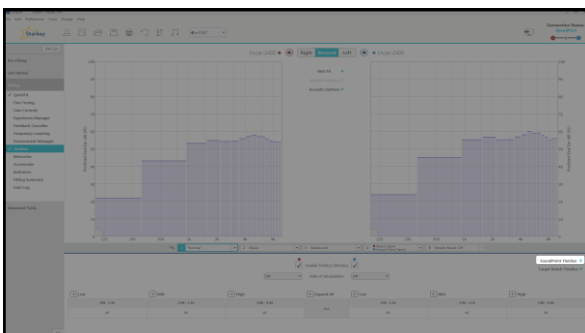
- SoundPoint Tinnitus
- Fine-tune adjustments
- Configure additional memories
- Personalize user controls
- Add an accessory




Patient Involvement

“People actively involved in their health and healthcare tend to have better outcomes.”

[“Health Policy Brief: Patient Engagement,” Health Affairs, February 14, 2013]

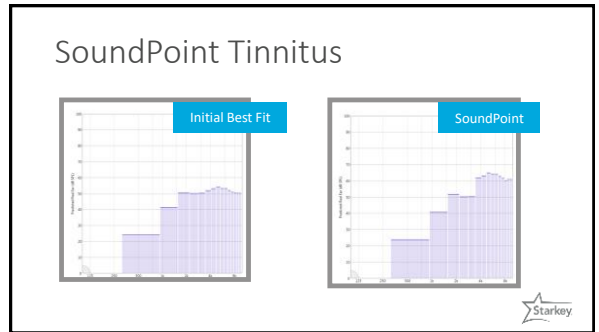
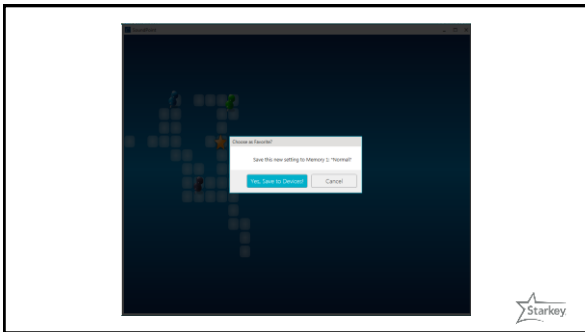
SoundPoint Tinnitus



Example Instructions

“You’re going to hear a sound/noise through the hearing aids. Tell me the point at which the noise is providing you the most relief from the ringing/tinnitus, but it’s not so loud that it’s keeping you from understanding my voice.”

- They may find it beneficial to close their eyes
- Your instructions may vary based on your goals



Fitting Multiflex Tinnitus

- SoundPoint Tinnitus
- Fine-tune adjustments
- Configure additional memories
- Personalize user controls
- Add an accessory

“The sound is distracting.”

Try:

- Decreasing overall level
- Enable modulation at desired rate
- Assign a memory with the stimulus disabled

“The stimulus sounds hissy.”

Try:

- Decreasing high frequency bands
- Increasing low frequency bands

“The stimulus is roaring.”

Try:


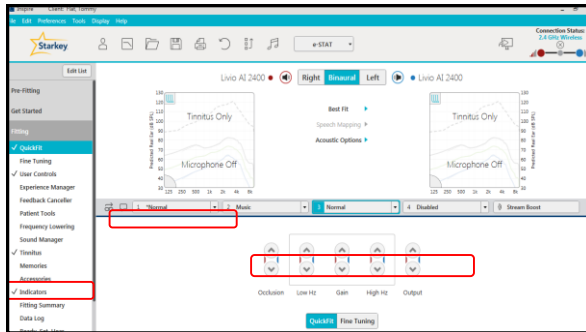
- Decreasing low frequency bands
- Increasing high frequency bands

Fitting Multiflex Tinnitus

Starkey

At follow-up appointments

- SoundPoint Tinnitus
- Fine-tune adjustments
- Configure additional memories
- Personalize user controls
- Add an accessory





Fitting Multiflex Tinnitus

Starkey

At follow-up appointments

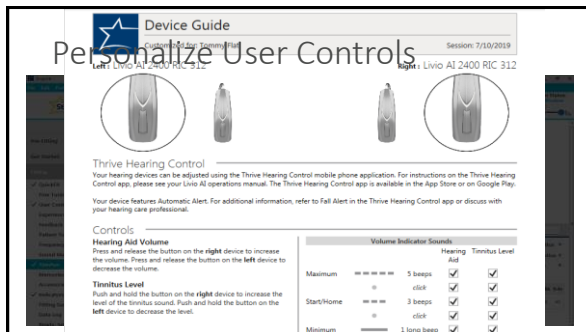
- SoundPoint Tinnitus
- Fine-tune adjustments
- Configure additional memories
- Personalize user controls
- Add an accessory



Personalize User Controls

Device Guide

Session: 7/10/2019



Controls

Hearing Aid Volume
Press and release the button on the right device to increase the volume. Press and release the button on the left device to decrease the volume.

Tinnitus Level
Push and hold the button on the right device to increase the level of the tinnitus sound. Push and hold the button on the left device to decrease the level.


Volume Indicator Sounds	Hearing Aid	Tinnitus Level
Maximum	5 beeps	<input checked="" type="checkbox"/>
Start/Home	click	<input checked="" type="checkbox"/>
Minimum	3 beeps	<input checked="" type="checkbox"/>
	click	<input checked="" type="checkbox"/>
	1 long beep	<input checked="" type="checkbox"/>

Fitting Multiflex Tinnitus

Starkey

At follow-up appointments

- SoundPoint Tinnitus
- Fine-tune adjustments
- Configure additional memories
- Personalize user controls
- Add an accessory



Add an Accessory



Favorite Button Functionality Within Inspire


- None: Pressing the button has no effect on the hearing aids
- Tinnitus Stimulus On/Off: Starts/Stops playing the tinnitus stimulus through the hearing aids*
- Start/Stop Audio Stream
- Comfort Boost: Reduces noise while optimizing sound quality in noise environments. Once activated, press the button again to deactivate the feature.
- Jump to Memory 4: Advances the hearing aids to memory 4*


*Only present when feature is engaged





Steps for Success

1. Tinnitus Evaluation
2. Counseling & Education
3. Treatment Plan
4. Fitting Multiflex Tinnitus Technology
5. Follow-up Care






Follow-Up Care




- 1-2 weeks
- 1 month
- 3 months
- 6 months
- 1 year
- Annually as needed

*Additional appointments may be necessary




Additional Tools & Resources...





relax

Relief sounds and education for patients who have tinnitus



- Multiflex Tinnitus Technology Handbook
- Tinnitus Lunch & Learn
- Tinnitus White Papers
- Questionnaires



TINNITUS MANAGEMENT

Resources

www.StarkeyPro.com

QuickTips

Tinnitus Technology: Initial Fitting Protocol
 SoundPoint and SoundPoint Tinnitus
 Livio AI and Livio Initial Fit Protocol


Summary

Defining Tinnitus

Causes & Triggers

Tinnitus Populations

5 Steps to Successful Management




MULTIFLEX
Flexible, Personal Relief
TINNITUS
TECHNOLOGY



Learn More


Back to the Basics
Tuesday 18 February 2020

Mastering Advanced Features
Tuesday 10 March 2020


Bringing it all Together with Inspire 2019.1 Software
Tuesday 7 April 2020

All courses 1:00pm to 2:00pm Sydney Time


Endorsed for Live and Recorded sessions




Your Starkey team




Dawn Rollings
 • **Managing Director**
 • 0407 095 529
 • dawn_rollings@starkey.com.au




Vincent Santana
 • Senior Product Specialist & Sales Support (NSW, SA)
 • 0413 834 718
 • vincent_santana@starkey.com.au




Joanne Sahdeo
 • Product Specialist & Sales Support (QLD, WA, NT)
 • 0407 603 292
 • joanne_sahdeo@starkey.com.au




Nicholas Bajan
 • Product Specialist & Sales Support (VIC, TAS)
 • 0448 664 11
 • nicholas_bajan@starkey.com.au



Your Starkey team – training & support




Judy Grobstein
 • Manager of Education and Audiology
 • 0439 802 020
 • judy_grobstein@starkey.com




Vija Heath
 • Customer Relations Team Leader / Audiologist
 • 1800 024 954
 • vija_heath@starkey.com.au

Customer Service
 1800 024 985 / australia@starkey.com.au



Questions?




Endorsement Points


ACAud Endorsed: 202003 (2 CEP points)

AudA Endorsed: CPD1920 046 (Category 1.2) (1 CPD point)

HAASA Endorsed: CPED2018-2020 (2020-002) (1.5 CPED points)



Thank You!



Judy Grobstein, AuD-FAAA, MACAud
Judy_Grobstein@Starkey.com