

APRIL 2013 HEARING SOLUTIONS MEETING

The meeting was well attended and Dr. Jill Mendez, AuD, of the Austin ENT Associates Round Rock clinic was introduced to the attendees for a presentation of LACE.



Dr. Mendez received her Bachelors in Communication Sciences Doctorate of and Disorders and Audiology from the University of Cincinnati in Ohio. She spent her 4th year residency in Phoenix, Arizona specializing in cochlear implants, BAHA, and balance disorders. After graduation she was the Director of Audiology at Arizona Ear Center for 2 years before moving to Texas in 2008. She has been fitting hearing aids in Georgetown for 4+ years serving the Georgetown area with Martin Audiology and Jones Hearing Center before joining the Round Rock clinic of Austin ENT.

Dr. Mendez has many friends and both former and current patients in our SIG and remember her presentation a year ago on Cros-BiCros at the May, 2011 meeting (See Meeting Notes).

LACE

Listening And Communication Enhancement

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LACE Auditory Training

What is it?

- ▶ LACE: Listening and Communication Enhancement Program
- ▶ It is a home-based, self-paced adaptive auditory computer program designed to improve listening and communication skills
- ▶ Developed by 2 Audiologists at the University of California, San Francisco.
 - Dr. Robert Sweetow and Jennifer Henderson Sabes developed LACE specifically for older adults with hearing loss

LACE Auditory Training

Main Objectives

- ▶ Enhance listening and communication skills
- ▶ Improve confidence levels
- ▶ Provide communication strategies
- ▶ Reduce unnecessary visits to audiologist
- ▶ Help patients recognize that hearing aids address hearing but do not correct listening and communication skills

LACE Auditory Training

What is it?

- ▶ According to a UCSF study by Sweetow and Sabes, LACE Auditory Training programs retrain the brain to comprehend speech up to 40% better in different listening situations, such as:
 - Noisy Restaurants
 - Competing speakers
 - Rapid speakers

LACE Auditory Training

What is it?

- ▶ The study also found improved performance on processing speed and memory. What do processing speed and memory have to do with hearing in noise?
- ▶ VIDEO:
<http://www.youtube.com/watch?v=ypudPb2sbIA>

QuickSIN Test

- ▶ Speech in noise test that represents realistic simulation of a social gathering
- ▶ 5 key words in the sentence that will be scored. Noise will increase with each sentence (25, 20, 15, 10, 5, 0 dB SNR)
- ▶ Normal hearing individuals require +2 dB SNR to correctly repeat 50% words
- ▶ Hearing impaired individuals require +12 dB SNR
- ▶ LACE improves SNR by 4.5 dB! (test with HA before and after LACE training)

LACE Auditory Training

What is it?

- ▶ “Just as physical therapy can help re-build muscles and adjust movements to compensate for physical weakness, LACE will help you develop skills and strategies to deal with situations when hearing is inadequate”
- ▶ Other programs are available for auditory training but they are not specifically designed for adults with hearing loss or specifically designed to address the changes in our brains that happen as a result of the aging process

Getting Started with LACE

▶ Who can benefit?

- Anyone who has difficulty with hearing, listening, or communicating can benefit from LACE Training.
- Hearing aids are not required, but if you have hearing aids, you should wear them during your training.



Getting Started with LACE

- ▶ When to start?
 - NOW!
 - Whether you've just received hearing aids, or worn hearing aids for decades, you can benefit from auditory training.



Getting Started with LACE

▶ Equipment Needed:

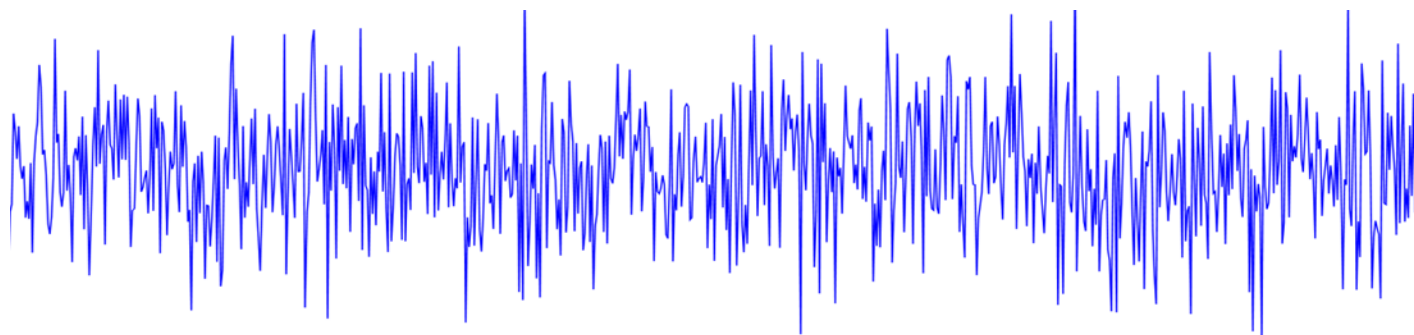
- Computer with high speed internet access
 - Microsoft Windows 2000, XP, or Vista.
 - Mac OSX 10 or newer
- CD-ROM or registration code
- www.neurotone.com: 1-800-409-5223
 - No expensive computer speakers are required. Desktop computer speakers are sufficient. External speakers are recommended if you have a laptop computer
 - Ask your Audiologist if your hearing aids can directly connect to the computer

Getting Started with LACE

- ▶ What does LACE Training involve?
 - 30 minutes a day
 - 5 days a week
 - For 1 month
- ▶ For best results, train when you feel fresh and alert
- ▶ Avoid long gaps of time between training sessions, preferably no more than 1–2 days
- ▶ Choose a training environment free of noise and distractions

Getting Started with LACE

- ▶ What does LACE Training involve?
 - You will work on five different skills:
 - Speech in Noise
 - Competing Speakers
 - Missing Word
 - Memory
 - Rapid Speech



What Does LACE Training Involve?

▶ Speech in Noise

- You will hear a person talking with “cocktail party” noise in the background. The amount of noise will progressively increase as you progress
- LACE will present the speech first. After you listen to the speech, you will see the text of the speech. LACE will ask if you heard the sentence correctly
 - If the answer is yes, the next sentence is more difficult
 - If the answer is no, the next sentence is easier



What Does LACE Training Involve?

▶ Competing Speakers

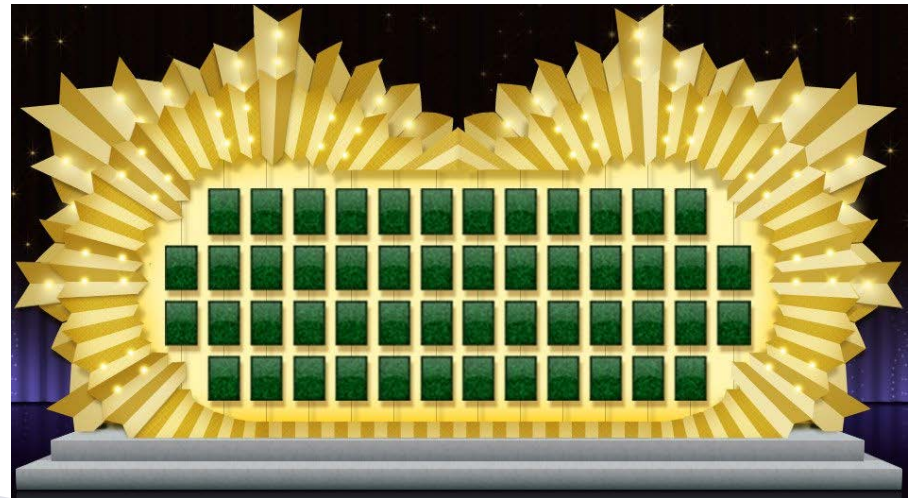
- In this task, you will be given a voice to focus on—either a man's voice, woman's voice, or a child's. There will be voices in the background that you do your best to ignore. The background voices will get louder as you progress.



What Does LACE Training Involve?

▶ Missing Word

- In this task, you will practice at quickly guessing at the missing word in the sentence. You'll be working on your ability to use context as well as on your processing speed
- Example:
 - “A week consists of seven (bell rings)”
 - Answer: “days”



What Does LACE Training Involve?

▶ Memory

- The memory task is a challenging way to improve your ability to “hold on” to what you’ve heard and answer questions about it
- You will be given a target word and asked a question related to the word
- Example:
 - The target word is “the”
 - Sentence: “Clothes do not make the man”
 - Question: What word comes before “the”
 - Answer: “make”

What Does LACE Training Involve?

▶ Rapid Speech

- The pace of the speaker's voice gets faster, and information is removed as well.
- You'll find that you can understand at a pace that you previously found too fast.
- LACE will present the speech first. After you listen to the speech, you will see the text of the speech. LACE will ask if you heard the sentence correctly
 - If the answer is yes, the next sentence is more difficult
 - If the answer is no, the next sentence is easier

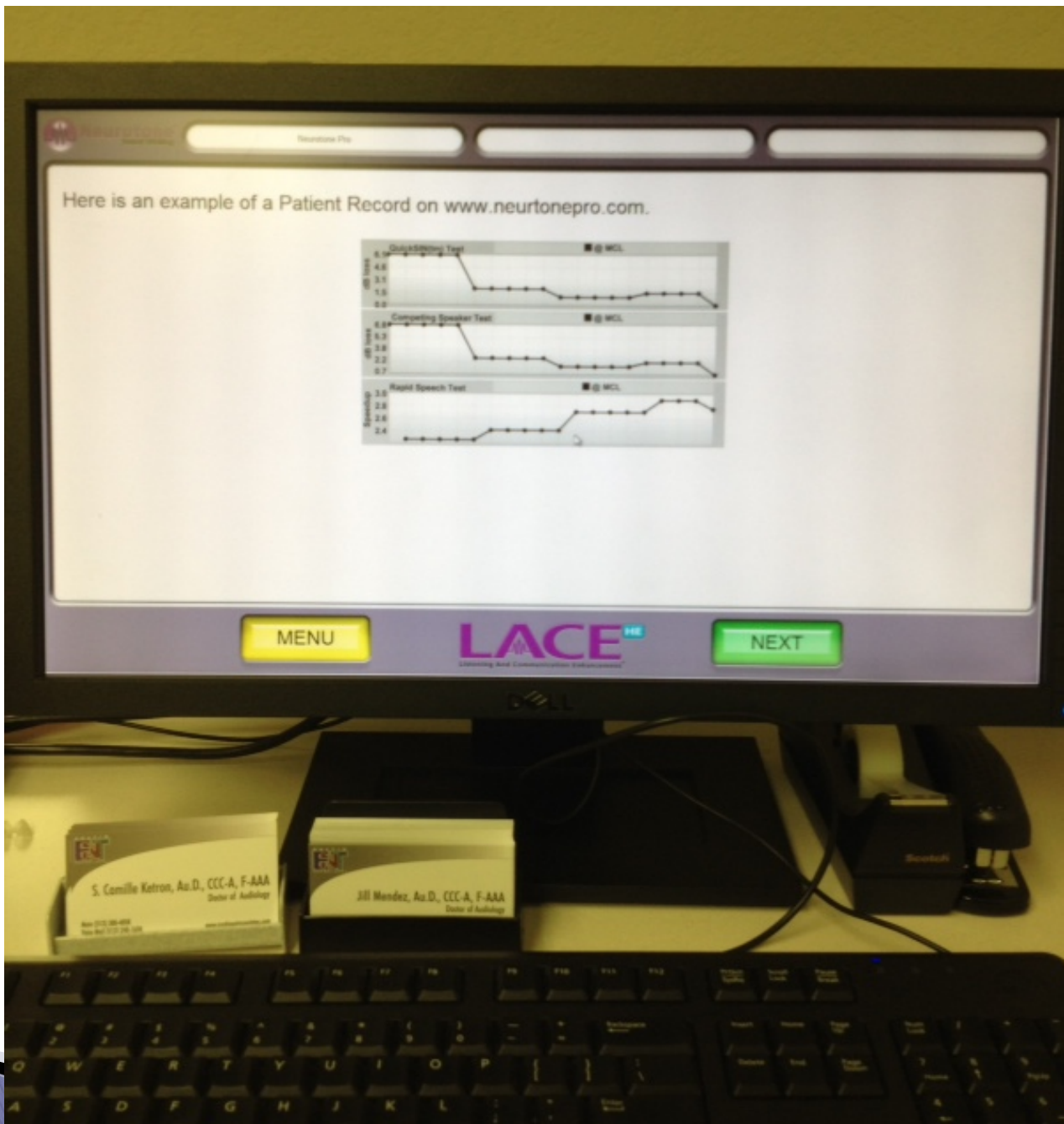
LACE Coaching

- ▶ The audiologists who developed LACE have discovered that people are more likely to stick with the program if audiologists act as coaches to guide them through the process.
- ▶ Everyone can benefit from support through the ups and downs of LACE training
- ▶ LACE keeps adapting to your improvement, so you *will* struggle to understand

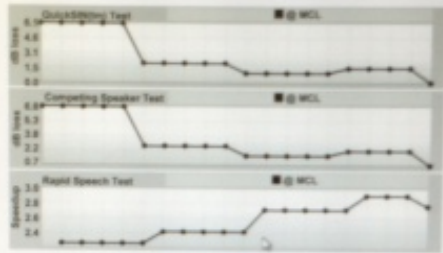


LACE Coaching

- ▶ The level of feedback that LACE offers is minimal. At the end of each day's training session your results are ranked as "improved" or "keep trying"
- ▶ Feedback is more detailed with a LACE coach
- ▶ Your coach can review the data on both testing and training for your sessions. You will get a "report card" on your progress. Details will include how much progress you have made and what that means



Here is an example of a Patient Record on www.neurtonepro.com.



MENU

LACE HE
Listening And Communication Enhancement

NEXT

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Getting Started with LACE

- ▶ Go to www.neurotone.com
 - Select: LACE Listening Programs
 - Select: Overview
 - Select: LACE Home Edition Software
 - Purchase software \$99
 - You will receive a code
 - Share code with audiologist if you would like a coach
 - Begin!

Keeping up with LACE

- ▶ What happens after the initial training?
 - LACE Home Edition offers unlimited and continued training after the initial 20 sessions have been completed
 - You can go back for a “booster session” at any time.



Results from LACE

- ▶ Teaches patients that hearing does not equal listening
- ▶ Demonstrates that not every word needs to be understood to get the message
- ▶ Helps to adjust to new amplified sound
- ▶ Builds confidence that they actually heard and understood what was said
- ▶ Improves cognitive skills training
 - Speed of processing and auditory memory

LACE Summary

- ▶ LACE is a listening program for adults (with or without hearing aids) designed to retrain the brain to understand up to 40% better in background noise.
- ▶ LACE training is conducted for 30 minutes, five days a week, for one month.
- ▶ The program can be purchased online and a coach is available to you if extra motivation is requested

Resources

- ▶ Austin ENT Associates: www.austinentassociates.com
- ▶ Austin ENT Associates Audiology website: www.austinaudiology.com
- ▶ Lace Website: www.Neurotone.com
- ▶ Hearing Education and Rehabilitation of Adults: <http://heara.ca>
- ▶ Sweetow R, Sabes J. (2006) The Need for and Development of an Adaptive Listening and Communication Enhancement (LACE) Program. *J Am Acad Audiol* 17:538–558.

At the conclusion of the presentation many questions and comments were directed to Dr. Mendez who dealt with each in a refreshing no nonsense honest and sincere manner since Austin ENT is not affiliated with nor owned by any hearing aid manufacturer and works with all major brands on a daily basis.

SEE FORUM FOR ADDITIONAL INFORMATION ON AUSTIN ENT ASSOCIATES.