learning to TALK

Dear families and friends,

Thank you so much for helping us with our study! We are grateful that we will get to see many of you again for your "timepoint 2" visits and we look forward to more fun, more stickers, more prizes, and more help from you and your children as we learn about how children are "learning to talk!"

Yours,

Ben Munson, Principal Investigator

**You may have seen LENA in the news!
Below is an excerpt from a British magazine, The Economist 2/27/14, one of the many articles appearing recently about LENA!**

Special points of interest:

- *LENA in the news!*
- *L2T LENA lab findings!*
- *Learn how to help your child develop early reading skills!*

"The Language Environment Analysis (LENA) device is like a pedometer, but it keeps track of words, not steps, by analyzing the speech children hear. Parents can use it to monitor, and improve, their patterns of speech, much as a pedometer-wearing couch potato might try to reach 10,000 steps a day, say. A recent study by Dana Suskind shows how promising this approach is. Dr Suskind is a pediatric cochlear implant surgeon in Chicago. Her new study shows that the use of a LENA device, combined with a single home visit to give parents advice, produces a 32% increase in the number of words a child hears per hour after six weeks. Dr Suskind's ***Thirty Million Words Initiative*** is now using LENA devices and weekly home visits to improve the linguistic diet of children in Chicago. Parents are taught to make the words they serve up more enriching. For example, instead of telling a child, "Put your shoes on," one might say instead, "It is time to go out.

What do we have to do?"
Other groups are trying similar approaches. In Providence, Rhode Island, Angel Taveras, the mayor, has started a project that uses LENA devices to improve the vocabularies of children in preschool. Meanwhile, in Chicago and several other places, nurses who visit mothers' homes to give them advice on health and nutrition also encourage them to chat to their children and read to them aloud. Such interventions are effective and not particularly expensive."

Parents are important contributors to a child's "language environment"!

FAQ's about the LENA

1. What does LENA stand for?

Language ENvironment Analysis

2. Why does my child wear the LENA Digital Language Processor (DLP) for a day?

Language researchers think that each child's home "language environment" has a tremendous effect on that child's language learning. By sending the LENA DLP home researchers can gather this important information and compare it to what a child does when visiting the Learning to Talk Lab. After a child wears the LENA DLP for a day, it is plugged into a computer, and a computer program makes counts of the things that language researchers think may have an effect on the size of a child's vocabulary: amount of silence and background noise, television and electronic sounds, number of times the child talks, the number of "turns" the child and another speaker take when they talk to each other, and the number of adult words spoken near the child. The Learning to Talk

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team is particularly interested in how many words are directly spoken to a child by the adults in the child's home.

3. How will the LENA help our research and other research in the field?

It will help us know what to tell parents to do to help their children have the large vocabularies needed for success in school! A previous research study found that starting at a very young age, children who heard more words directly spoken to them by the adults in their homes had larger vocabularies, stronger reading skills, and were more prepared to enter school, than children who did not have as many words spoken directly to them at home. At Learning to Talk, because our goal is to study how children learn words and sounds, we want to find out more about why a child has a larger vocabulary if he or she hears more words at home. One way to do this is to compare the LENA report we get for each child to how that particular child did on the speech and language tests we give during the lab visit. We want to see how a child's home "language environment" affects how many words that child knows and uses.

Learning to Talk Lab Findings Concerning LENA

When you and your child came to the Learning to Talk Lab, remember the tasks your child did in the sound booth when he or she was "watching movies?" For one of the tasks we were interested in how quickly and correctly your child could show us he or she understands a word spoken by someone else. Your child was shown

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four pictures on the computer screen: for example, a box, a gift, a bear and a ring. Then your child heard a sentence such as "find the box" and was told by our testers to "use your eyes to find the picture the computer says!" Our Eye Tracking Computer then followed your child's eye movements so we knew what pic-

ture your child looked at and how quickly your child followed the computer's instruction. Tristan Mahr, a PhD student in the Learning to Talk Lab, found that children who did the best on this "looking" task were the children who had **heard more words spoken directly to them by the adults in their home**, as measured by LENA! Following the trail further, he found that children who did well on this "looking task" also did well on two of the tasks your child did in the Shevlin Hall lab that measured **how many** words a child knows. When Tristan found these connections we were very excited because it says that the results we have gotten from the LENA reports are connected to how quickly a child recognizes familiar words as well as how many words he/she knows!

Tips for Reading to your Child

While most people know that the more you read to your child, the better for speech and language development as well as early reading skills, here are some other things you can do before, during, and after reading time to help your child get ready to read!

- Ask "wh" questions (what, where, who, when, how, why) about the story. This covers the characters involved in the story, the setting, the time frame, and the reasons behind the action: all things that are important for later reading skills.

- Ask open-ended questions about the story rather than yes/no questions. For example, instead of asking "Did you like the elephant in the story?" you will get more words from your child (instead of just "yes or no") if you ask, "Who did you like best in the story?" "What funny things did the elephant do?" etc.

- Tie the story into something familiar to the child or to personal experiences. For example, you could say: "That elephant went to the hamburger place just like we did last week with Grandma, remember? Wait, I can't remember: what did Grandma have onion rings or French fries like the elephant?"

- Expand on what the child comments on from the story. For example, if your child says, "Funny elephant!" You could say, "Funny elephant! He's so funny because he always looks for the pig in the wrong place!"

- Give your child feedback on responses to questions about the story. For example, if you ask your child, "Where did the elephant hide?" and your child says, "in the big box!" you could say, "yes, you are right! That elephant couldn't fool you! What a good reader you are!" That teaches a child more words AND another important "school skill:" how we take turns in conversation! To become a good talker and reader we have to learn that when someone asks a question, we listen, think, and then we answer!

Our Investigators

     Cara Donohue is a first year graduate student in Speech-Language Pathology. She received her B.A. in Speech-Language Hearing Sciences at the University of Minnesota in May 2013. She has had a variety of clinical and research experiences working with adults and children, and is currently involved in research for the Learning to Talk lab with Dr. Munson and the Fluency Lab with Dr. Sasisekaran at the U of MN. In the future, she hopes to work in a medical setting as a speech language pathologist working with people who have swallowing disorders, communication disorders resulting from strokes and traumatic brain injuries, voice disorders, and people who are Deaf/Hard of Hearing who have cochlear implants. She plans to write a thesis next year for more research experience to help determine if she would like to pursue further education at some point in her career. While she is committed to academics, running competitively for the U of MN running club has been an important part of her college experience. Last fall she placed first in the regional meet and second in the national cross country meet for university running clubs.

We Want You!
Participate in the Twin Cities!

Interested in helping us improve methods for teaching young children? Join our research project! Our study looks at how young children learn sounds and words! Both you and your child can be involved!

Who can participate?

- Children who are 2-3 years old
- Children who are native English speakers
- Children who have normal hearing and are typically developing or have cochlear implants!

Families are paid for their participation and your child will receive a small toy and a book.

Transportation (cab) will be provided if you would like it.

How does the study work?

Sessions take place at the University of Minnesota's Shelvin Hall, 164 Pillsbury Drive, Minneapolis, MN.

Your child will participate in 1-6 sessions and the sessions last about 1-2 hours. If you would like to learn more

about this study, please email us at learningtotalk@umn.edu, or call Maria Swora at 612-624-6893, or visit our website, www.learningtotalk.org and enter your information on our **Participate** page! We look forward to working with you!

Please pass this information on to family and friends who might be interested in this study. Thanks!