

# OUTCOMES PROJECT UPDATE

December 2009

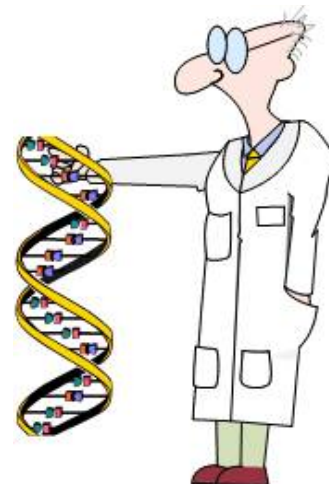
Issue 7

## PROJECT PROGRESS

### THE GENETIC STUDY



In the previous "Outcomes Project Update" we mentioned that we have initiated a study aimed at identifying the cause (aetiology) of hearing loss in children participating in the LOCHI project. Deafness in children is most often due to inherited (genetic) factors, but environmental factors, especially cytomegalovirus (CMV) infection during pregnancy, are also common. We have recently begun the analysis of DNA isolated from blood taken shortly after birth, the so-called Guthrie blood spots, for the presence of cytomegalovirus (CMV) and for changes (mutations) in 3 genes believed to be the most common causes of inherited hearing loss in children, namely the connexin 26 gene, the pendrin gene and the mitochondrial DNA 12S rRNA gene. This testing is only done after we have had an opportunity to discuss this study with parents/carers and obtained written consent. If you have not yet been contacted, but would like to discuss the testing, please call or email a LOCHI researcher in your state



The genetic investigations have just begun and the results are therefore preliminary. The results so far have shown that:

- 6 of 96 children (6.3%) had detectable CMV infection at the time of birth;
- 17 of 91 children (18.7%) have 2 mutations in their connexin 26 genes. We usually conclude that the hearing loss in these children is due to the changes in the connexin 26 genes;
- 6 of 91 children (6.6%) have 1 mutation in their connexin 26 genes. The hearing loss in these children is most likely due to connexin 26, but we can't be certain;
- 2 of 91 children (2.2%) have mutations in the mitochondrial DNA.

Changes in the pendrin gene can cause Pendred syndrome or hearing loss with enlarged vestibular aqueduct (EVA or LVAS). Analysis of the pendrin gene is more time-consuming and the screening of the first batches of DNAs is therefore still in progress. We will of course inform the families of the results as soon as the analysis of their child's DNA is completed.

#### Lochi's Stats

**479 participants!**

333 hearing aid users  
81 unilateral implant users  
65 bilateral implant users



242 NSW  
136 VIC  
101 QLD



# SPEECH, LANGUAGE AND LISTENING

## Holidays and Summer



With summer just around the corner here are some activities to make the most of fun in the sun!

### Listening:

**Dressing is for everyone:** When getting dressed for the park or beach lay out the clothes your child is to wear. Encourage your child to choose the item that you name i.e. “where are your shorts?” and then help to put it on your child. For older children you could also let them choose between 2 choices of each item. You can also play a similar game and dress a dolly or teddy in some of your child’s clothes. They might be too big but it’ll be a laugh anyway!



### Language:



**Sandy fun:** If you are at the beach or in a sand pit take the opportunity to use a range of action words to talk about what you or your child is doing. Some plastic cups and containers from home are great tools in a sandpit! You can also use some favourite animal or transport toys and hide them in the sand. Some examples of language to use are: “pour the sand” – “look, the bucket is empty” – “fill it up with sand” – “tip it over” – “where’s your car? Let’s dig and find it“. You can also play a similar game with water if you have a paddling pool or large bucket of water.

**Junk mail joy:** Put all that junk mail to good use and make a summer scrap book. Your child can practise their cutting skills (or if they’re too young you can cut and they can glue) and arrange each item into themes such as summer clothes, summer activities, summer food, summer drinks, places you go in summer, etc. Make a new page for each theme and draw pictures of any other summer words that might go in the scrap book. For older children you can write the words for each picture underneath and encourage your child to tell you what the first sound is for each word before you write it.



Below are some websites that offer free resources and activities you can do with your child. These sites also have a page specific for summer and holidays such as Christmas, New Years and various other holidays that you may celebrate:

<http://www.dltk-kids.com/>

<http://www.preschoolactivitybox.com/>

<http://craftsforkids.com/projects.htm>

<http://www.better-childrens-books.com/index.html>

<http://www.starfall.com/>



# TEST PROFILE

## WNV

In this edition we are explaining a test used in the LOCHI study to assess children's thinking skills – the Wechsler Nonverbal Scale of Ability, or WNV.

The WNV is a test that was developed in 2006 by David Wechsler and Jack Naglieri. It can be used with children from 4 to 21 years of age. The WNV does not rely on children having to listen to instructions or respond verbally. It was specifically designed so that children who have difficulties using spoken English are not

disadvantaged by not understanding instructions or knowing the words with which to respond. For this reason, the test can be used with children who are not native speakers of English, children with language delay or disorder, and children with a hearing loss.

The WNV must be administered by a psychologist with experience in assessing children. The test activities are designed to examine children's ability to remember visual information, solve problems and think abstractly. To complete the test, the children need to be able to pay attention and think quickly, as they have a limited time period in which to respond. Generally, it takes around 45 minutes to complete the test.

After a child has completed the test, the psychologist compares the child's results to those obtained from a large population of normally developing children of the same age. This gives an indication of each child's skills compared to those of his or her peers.

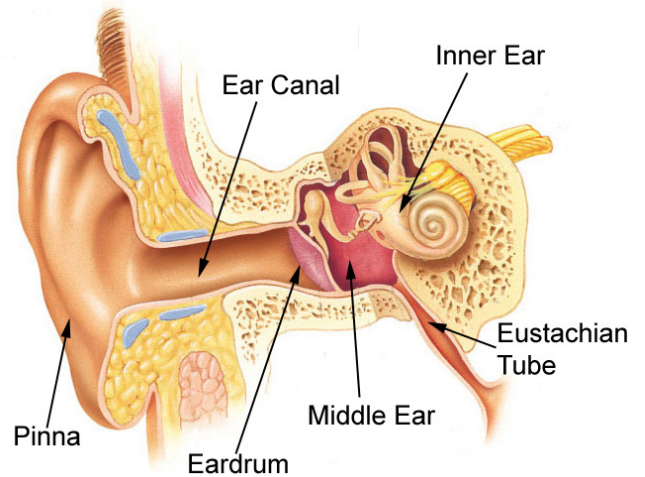
The LOCHI study engages experienced psychologists to administer the test to children when they reach the age of 5 years. These assessments are provided to LOCHI study participants at no cost to parents, meaning that parents receive an assessment valued at over \$300 for free.



# TIPS FROM THE NAL TEAM

A child who has middle ear infection or build up of earwax does not respond well to sounds.

- Middle ear infection – this is caused by a virus or bacteria, and usually occurs after a child has a cold. About 75% of children under the age of 3 years would have experienced one or more instances of middle ear infection. If your child does not respond well to sounds, complains of a sore ear or rubs his/her ears showing discomfort, consult your family doctor.



- Earwax – ear wax may build up in the ear canal of your child. Excess buildup will cause discomfort. It will also cause a hearing aid to whistle. Your family doctor may recommend the use of eardrops, attempt to remove it or refer your child to see an Ear-nose-throat specialist for treatment.

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If you have any questions or comments about the study, please contact the Sydney NAL office on (02) 9412 6947 or email us at: [outcomes@nal.gov.au](mailto:outcomes@nal.gov.au)



## Seasons Greetings

성탄절날을 즐겁게 보내십시오

Wesołych Świąt Bożego Narodzenia

С НОВЫМ ГОДОМ

~نایا سال مبارک هو

Nootana Samvatsara Subhakankshalu

สุขสันต์วันคริสตมาส

新年快乐

Cristmas-e-shoma mobarak bashad

Eid Millad Saed

Happy Chanukah

明けましておめでとうございます

стрекен бозик

Selamat hari natal

