

# Speech-Language Pathology for Clients with Down Syndrome

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# What is Speech-Language Pathology?



Also known as Speech (and) Language Therapy.

Is a specialty field that focuses on the evaluation and treatment of communication and swallowing disorders.

Children and adults with Down Syndrome are impacted by difficulties with hearing, feeding, speech and language.



# Hearing Loss

In People with Down Syndrome



# Hearing Loss

- Ear infections occur frequently in infancy and early childhood in all children.
- But, because of anatomic differences in the ears of children with Down syndrome (narrow and short canals), they are more susceptible to accumulations of fluid behind the eardrum.
- This is known as Otitis Media with Effusion (OME).
- These problems result from fluid retention and inflammation in the middle ear; sometimes with infection. The presence of fluid makes it more difficult for the child to hear, resulting in fluctuating conductive hearing loss.



# Hearing Loss

- Speech and language are learned through hearing, vision and touch.
- Hearing is very important to speech, and studies have shown that speech and language development are negatively affected by chronic fluid accumulation.
- Children with Down syndrome often have fluctuating hearing loss due to the frequency of fluid accumulation.
- When fluid is present, hearing is affected; as fluid drains, hearing improves. When children do not consistently hear well, it is difficult for them to learn how sounds and events are related, e.g. the ring of the telephone or someone calling them.
- It is important for parents to ensure that their child is hearing well.



# Speech Characteristics

In People With Down Syndrome



# Speech Characteristics

- There are a wide range of abilities that children with Down syndrome demonstrate when using speech.
- Speech intelligibility is one of the most difficult areas for people with Down syndrome at all ages.
- Many children have difficulty with the strength, timing and coordination of muscle movements for speech. Speech involves:
  - coordinating breathing (respiration)
  - voice (phonation)
  - and the production of speech sounds (articulation)



# Speech Characteristics

- Factors that can contribute to speech intelligibility problems include:
  - articulation problems with specific sounds
  - low oral-facial muscle tone
  - difficulty with sensory processing and oral tactile feedback
  - use of phonological processes
  - difficulties in motor planning for speech.





# Language Characteristics

In People with Down Syndrome



# Language Characteristics

- Some areas of language are generally more difficult for people with Down syndrome while other areas are relatively easier.
- People with Down syndrome have strengths in the area of vocabulary and pragmatics (social interactive language). They often develop a rich and varied vocabulary as they mature. They have good social interactive skills and use gestures and facial expressions effectively to help themselves communicate.
- They generally have the desire to communicate and interact with people. Syntax and morphology (including grammar, verb tenses, word roots, suffixes and prefixes) are more difficult areas, possibly because of their complex and abstract nature.
  - People with Down syndrome frequently have difficulty with grammar, tenses and word endings and use shorter sentences to communicate.



# Language Characteristics

- Most children with Down syndrome are able to understand much more than they can express.
  - As a result, their test scores for receptive language are higher than for expressive language.
  - This is known as the receptive-expressive gap.
- Children with Down syndrome learn well through visual means, so often reading and the use of (some) computer programs focusing on language skills can help them learn.
  - Seeing words and images associated with sounds and being able to read words can help speech and language develop.
  - For some children, the written word can provide helpful cues when using expressive language.



# Feeding and Swallowing

In People with Down Syndrome



# Feeding and Swallowing

- Speech is a secondary function that uses the same anatomic structures used for feeding and respiration.
- Low muscle tone (hypotonia) affects feeding and will also affect speech.
- In feeding, children gain practice with strengthening and coordinating the muscles that will be used for speech.



# Feeding and Swallowing

- If a child has difficulty feeding, it is important that his or her parents seek guidance from a feeding specialist (a speech-language pathologist or occupational therapist who has advanced training).
- Feeding therapy can help strengthen the oral muscles, which in turn can have a positive effect on speech.



# Feeding and Swallowing - Difficulties

- Silent aspiration – food, drink, saliva, mucous going into lungs without a cough or any attempt of expulsion
- Mouth is not alert or ready for feeding or eating
- Swallowing air leading to stomach cramps and indigestion
- Loss of interest in feeding/eating before meal is finished
- Difficulty moving on to spoon feeds and tolerating different textures



# Other Skills

Related to Speech and Language





# Other Skills Related to Speech and Language

- Other important pre-speech and pre-language skills are:
  - the ability to imitate and echo sounds
  - turn-taking skills (learned through games such as peek-a-boo)
  - visual skills (looking at speakers and objects)
  - auditory skills (listening to music, speech, and speech sounds for lengthening periods of time)
  - tactile skills (learning about touch, exploring objects in the mouth)
  - oral motor skills (using the tongue, moving the lips)
  - and cognitive skills (understanding object permanence, and cause and effect relationships)



# Other Skills Related to Speech and Language

- The family can stimulate these pre-speech and language skills at home.
- The speech-language pathologist can help parents learn the skills that they need to help their child begin learning language and using speech.



# Academic Settings

What Speech and Language Skills Are Needed?



# What Speech and Language Skills are Needed for Academic Settings?

- Parents can help by working as a team with their school personnel to develop an individualized treatment program.
- In school settings in the United States, the plan will be part of the IEP (Individualized Education Program).
- These are not formally required here in Trinidad and Tobago but most speech-language pathologists work to have a similar type of document created.



# What Speech and Language Skills are Needed for Academic Settings?

- Speech and language IEPs may include:
  - diagnosis and evaluation
  - individual therapy sessions
  - group therapy sessions
  - classroom-based therapy sessions
  - and/or outcome goals
- The IEP may also include provisions for information, consultation and guidance to parents and classroom teachers.



# What Speech and Language Skills are Needed for Academic Settings?

- When children are in inclusive settings, the speech-language pathologist may:
  - consult with the teacher to provide information about a child's speech and language needs
  - may suggest modifications, such as providing the student with written rather than verbal instructions or including fewer items on a class worksheet.
- Accommodations such as preferential seating to help problems in hearing and listening may be used.



# What Speech and Language Skills are Needed for Academic Settings?

- Certain skills may also help prepare a child to get the most out of classroom learning; children who have learned to follow directions, have a good grasp of classroom routine and have basic subject knowledge are well prepared for a successful educational experience.
- Other communication skills needed include the ability to talk and interact with other children, teachers, custodians, cafeteria staff and other school personnel such as security guards.



# What Can You Do

To help with speech and language





# What can you do to help with speech and language?

- Caregivers can provide practice in speech and language skills at home and in the community.
- Varied and inclusive home and community experiences help children, adolescents and adults with Down syndrome continue to acquire and use new communication skills.
- Activities that involve social interaction, such as scouting or participating in youth groups, can help young people with Down syndrome develop and practice speech and language skills.
- When a child, or any person, has more opportunities to communicate, his or her skills will expand.



# What can you do to help with speech and language?

- The speech-language pathologist can provide information and can design a home activities program to help the child or adult practice the communication skills being addressed in therapy.
- It is important that caregivers stay in regular contact with the speech-language pathologist so that their child/relative can practice speech and language skills.
- Regular phone or e-mail contact, a journal or audiotapes can provide that continuous contact.
- Caregivers can also seek additional services as needed. Books, workshops, conferences and newsletters can provide state-of-the-art information.



# How Can You Get Help?



# How Can You Get Help?

- Parents are often frustrated because they feel that speech and language services are not readily available or easily accessible.
- Unfortunately, at this time, there are only two public sector speech-language pathologist in Trinidad and Tobago
  - At the Scarborough Hospital in Tobago.
  - At Child Guidance in Tobago
- All other therapists work privately.
- There is a speech and hearing clinic at the University of the West Indies run by Dr. Kathy-Ann Drayton.



# How Can You Get Help?

- Full audiological/hearing evaluations are performed:
  - at DRETCHI
  - By an audiologist
    - Dr. Natasha Bratt, Au.D
    - Luz Sanchez



# What Does A Speech-Pathologist Do?



# What Does A Speech Pathologist Do?

- A speech-language pathologist (SLP) can provide evaluation and treatment for the speech and language difficulties experienced by children, adolescents and adults with Down syndrome.
- SLPs can work with families and teachers to design and implement an effective school, home and community program to help children develop stronger communication skills.
- SLPs can also work with employers to make the workplace an effective communicative environment through staff education and training so to assist the adult in having a meaningful work experience.
- SLPs are also qualified to perform hearing screenings, NOT full evaluations.



# What Does A Speech Pathologist Do?

- They can help develop a comprehensive treatment plan to address all of the areas in which the child or adult may be experiencing difficulty, including:
  - receptive and expressive language
  - semantics (vocabulary)
  - syntax (grammar)
  - pragmatics (uses of language and social and conversational skills)
  - classroom language skills
  - Speech
  - oral motor planning and oral motor strengthening
  - in addition to activities of daily living (ADLs).





# How Can You Find a Qualified SLP?



# How Can You Find A Qualified SLP?

- Qualified Speech-Language Pathologists in Trinidad and Tobago possess:
  - From the UK, a Bachelor's Degree in Speech-Language Therapy
  - From the US and Canada, Master's degree in Speech-Language Pathology
  - Other: A qualifying degree in Speech-Language Pathology (the entry level degree relevant to that country or region, usually a Master's degree)
- Their academic coursework, clinical hours and experience must have been reviewed by the Occupational Therapy and Speech-Language Pathology Board of Trinidad and Tobago, which would then need to be approved by the Council of the Professions Related to Medicine in Trinidad and Tobago (CPRM).
- They are registered (and have a registration number) with the Council of the Professions Related to Medicine in Trinidad and Tobago.



# How Can You Find a Qualified SLP?

- Contact the OTSLP Board at [otslpboard@gmail.com](mailto:otslpboard@gmail.com) and ask for a list of registered speech-language pathologists
- Check the local newspapers for the Board's printed list
- NB:
  - The hospitals and RHA's have outdated lists
  - The Speech-Language-Audiology Association of Trinidad and Tobago (SLAATT) website only provides therapists registered with the association. All Board registered members are NOT on this list.



# Techniques

And Practice!



# Techniques for Language

- Mirroring (non-verbal turn taking)
- Responding (verbal turn taking)
- Matching Communicative Intent
- Descriptive Talk
  - Parallel Talk
  - Self Talk
  - Event Talk
- Target Talking/Modelling
- Expanding/Building
- Time Delays & Prompting
- Begin with child's/adult's interests and desires

[www.asha.org/Events/convention/handouts/2006/1078\\_Scherer\\_Nancy/](http://www.asha.org/Events/convention/handouts/2006/1078_Scherer_Nancy/)



# Techniques for Speech Intelligibility

- Attempt to structure the situation as much as possible for contextual support
  - Add context for you or child/person with DS where context is lacking
- Gloss the utterances
  - Fill in meaning/words as much a possible without detracting from original utterance
- Touch cues - consonants
  - Touch lip for p, b, m, f, v, th, w
  - Touch near mouth for sh, ch, s, t, z, d, j, zh ('s' in measure)
  - Touch neck/above Adam's apple for k, g, ng, h
  - Touch middle of cheek for all other sounds

## Tapping/Metronome cueing/Pacing

- Keeping rhythm while you/they speak if prone to talking too quickly



# Techniques for Feeding/Swallowing

- Ensure child is hungry
  - Be mindful of the feeding environment
  - Proper positioning
  - Make mealtime a social event
  - Establish good routines
  - Mouth play
- DO NOT
    - Push tongue back into the mouth
    - Pinch the tongue
    - Say “put that tongue away”
      - May lead to more tongue protrusion
      - Or maladaptive attention seeking behaviours
  - Be conscious of sensory overload

[http://downsyndrome.ie/wp-content/uploads/2012/08/feeding\\_oral\\_development.pdf](http://downsyndrome.ie/wp-content/uploads/2012/08/feeding_oral_development.pdf)



# Accommodations for Hearing Loss

FM system/hearing aids/CI/other technology

Student seated close to point of instruction (this does not necessarily mean seated in the front of the classroom if point of instruction is in another location).

Obtain student's attention prior to speaking

Directly face student when giving instructions (and in close proximity w/in 3-5 ft.)

Speak slowly and clearly

Do not speak while back is to student (writing on board, walking around room, etc.)

- Keep hands away from face when speaking
- Use non-verbal language (body language, facial expressions, etc.) to highlight important information
- Provide student with adequate response time by pausing after instructions/questions
- Repeat information given by peers out of view or over PA system
- Signal when there is a topic change and give adequate response time for student to get and organize correct

<http://blog.asha.org/2013/03/14/kid-confidential-hearing-loss-classroom-difficulties-and-accommodations/>





# (More) Accommodations for Hearing Loss

- Avoid having student sit near competing noise sources (e.g. heating/AC vents, door to hallway, etc.)
- Use visual aids, graphic organizers, etc. as much as possible
- Provide multisensory learning opportunities
- Pre-teach vocabulary and new concepts in one-on-one quiet environment
- Minimize copying by providing teacher outlines or copies of notes/lessons, PowerPoint presentations, etc.
- “Notebook” buddy to help student maintain adequate notes and fill in information he/she might have missed during instruction
- Use captioned videos/DVDs where possible

<http://blog.asha.org/2013/03/14/kid-confidential-hearing-loss-classroom-difficulties-and-accommodations/>



# Questions?

- Contact me personally at:
  - [kiara.ttslp@gmail.com](mailto:kiara.ttslp@gmail.com)
- Contact the Therapeutic Workshope (for Speech and Occupational Therapy), where I work, at:
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