Important Nutritional, Oral Motor, Feeding, and Language Ideas to Ensure Optimal Development of Your Child with Down Syndrome

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Medical Assessment/Intervention
- Cardiology
- Gastroenterology
- Audiology
- Ophthalmology/Vision Specialist
- Nutrition
- Physical/Occupational Therapy
- Speech Therapy/Lactation Consultant
- Developmental Therapy

Oral Motor/Feeding/Language Characteristics of Children with Down Syndrome
- Difficulty with motor planning
- Decreased oral sensory awareness due to low tone
- Overstuffing of food
- Tongue protrusion
- Issues with middle ear fluid/hearing loss
- Motivated by music
- Excellent gestural imitation
- Telegraphic speech patterns

Ideal Nutrition for Infants/Babies with Down Syndrome
- Breastfeeding/Breast milk
- Organic foods/Clean diet
- Avoidance of gluten
- Avoidance of dairy products
- Vitamins/Supplements
- Appropriate feeding tools/aids

Bottle-Feeding/Breastfeeding Techniques and Aids
- Sara Rosenfeld-Johnson’s bottle-feeding technique
- Specialized bottles: Haberman Feeder, Dr. Browns, Innobaby, Calma, etc.
- Paced bottle-feeding
- Firm bottle nipples
- Nipple shields
- Supplemental nursing system

Bottle-feeding/Nursing Aids
**Oral Motor Activities/Exercises**
- Breastfeeding
- Straw drinking
- Open cup drinking
- Tongue elevation and lateralization exercises
- Graded chewing
- Lip strength/closure activities
- Oral sensory awareness activities
- Horn hierarchy

**Specific Oral Motor Exercises for Tongue**
- Tongue pointing exercises
- Lateralization of food bolus
- Tongue retraction
- Tongue tip definition/elevation
- Tongue-ties

**Specific Oral Motor Exercises for Lips/Jaw**
- Lip rounding
- Prolonged lip closure
- Lip isolation
- Graded chewing
- Bite and pull
- Oral tug of war
- Oral sensory awareness
- Oral proprioceptive input

**Jaw Grading/Tongue Lateralization**

**Lip Rounding**
Exercises with Food

- Combining crunchy with smooth
- Food shape (strips)
- Varying viscosity of liquids
- Isolating lips to pick up food items
- Lateralization of food items
- Graded biting

Foods Used in Therapy

Oral Facial Tone Variability

Speech/Language Strategies

- Audiological Assessment
- Use of a Total Communication Approach
- Expansion and differentiation of vocabulary
- Modeling and expansion of sentence structures
- Emphasis on articles in speech, e.g. the, a, etc.
- Incorporation of siblings in therapy
- Literacy Training
- Non-therapy activities: Tae kwon do, dance, swimming, etc.

Importance of Use of Sign Language with Children with Down Syndrome

- Issues with motor planning
- Good at imitating gestures
- Allows communication until verbal speech is present
- Visual learners/hearing difficulties

American Sign Language

- Known as ASL
- Is the true language of the deaf
- Has its own syntax and grammar
- Best to use if child is truly deaf
- Third most used language in the United States

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**Signing Exact English**

- Known as SEE
- Using ASL signs, with English grammar and syntax
- It’s expanded with prefixes, tenses, articles, prepositions and endings
- Manual representation of English vocabulary and grammar
- Takes longer to communicate
- Used to teach deaf children English

**Example of SEE**

![Example of SEE]

**Types of Signs**

- Iconic Signs
- Nouns versus Verbs
- Have meaningful origins, e.g. boy, potato, onion, etc.
- Sign approximations

**Sign Language Strategies**

- Viewing of Signing Times videos
- Incorporation of siblings in therapy
- ASL.pro video dictionary
- Pairing sign with verbal words

**Resources to Learn Sign Language**

- [www.signingtime.com](http://www.signingtime.com)
- [www.babysigns.com](http://www.babysigns.com)
- [www.asl.pro](http://www.asl.pro)
- [www.loveandlearning.com](http://www.loveandlearning.com)
- [www.signingsavvy.com](http://www.signingsavvy.com)

**Community Resources**

- Gigi’s Playhouse
- National Association of Down Syndrome
- Ups for Downs
- North Shore Down Syndrome Awareness Group
- Lutheran General’s Down Syndrome Clinic
Questions???