Babbling, Movement and More
What's Wrong with My Child?

Ann-Marie C. DePalma, CDA, RDH, MEd, FADIA, FAADH, FADHA

Referral Sources:

Missouri Early Intervention program – Missouri First Steps – birth to age 3
https://www.mofirststeps.com 866-583-2392
Missouri Special Education – Parent Training and Information
http://www.missouriparentsact.org 800-743-7634
American Speech, Language, and Hearing Association, www.asha.org
1-800-638-8255
International Association of Orofacial Myology, www.iaom.com
303-765-4395
Federation of Children with Special Needs, www.fcsn.org
617-236-7210
ERIC Clearinghouse on Disabilities and Gifted Education, www.hoagiesgifted.org
(governmental agency no longer in existence, but with archival information)
National Institute on Deafness and Other Communication Disorders (NIH), www.nidcd.nih.gov
1-800-241-1044
Easter Seals, www.easterseals.org 800-221-6827
Pathways Awareness Foundation, www.pathwaysawareness.org 1-800-955-2445
1 Association for Education of Young Children, www.naeyc.org 1-800-424-2460
Autism Society of America, www.autism-society.org, 800-328-8476 (national organization with state chapters)
Autism Speaks, www.autismspeaks.org, 212-252-8584
First Signs, https://firstsigns.org
First Words Project, http://firstwords.fsu.edu (Florida State University) 850-488-5780
New York Office of Children and Family Services, https://ocfs.ny.gov

Treating the Dental Patient with a Developmental Disorder – Karen Raposa, RDH, MBA & Steven Perlman, DDS, Wiley Blackwell Publishers, Iowa 2012
ISBN-13: 978-0-8138-2393-5/2012
Available at Amazon.com or Barnes&Noble.com

Selected Slide Information

Delay vs Disorder

Delay = skills developing at a slower rate than normal
Disorder = skills developing abnormally

Delays vs Disorders:

Domains of Early Childhood Development:

- Cognition
- Communication
- Gross & Fine Motor
- Social/Emotional
- Self-help

Piaget's Theory:

C = S+L+L

What Is Speech?

- Motor act of sound production involving phonation, resonation, and articulation
- Phonation=rules of sound system that involve the sound sequences that make up words
- Resonation=voice and fluency, vocal quality, pitch, loudness, rate and rhythm; can be affected by problems in larynx and breathing pathways
- Phonation and Resonation involve pharyngeal, oral, and nasal cavities
- Articulation=sound errors which can be substituting, distorting or omitting normal speech sounds; involves the rapid and precise movement of teeth, tongue, lips, mandible which shapes vocal tract to allow speech production

What is Language?

- Tool that is symbolized and communicated to others
- Set of concepts (words) that are governed by a rule system (syntax and grammar)

Warning Signs

- Minimal or no babbling as an infant (quiet baby)
- No words by 18 months of age
- No simple phrases by age 2
- Inappropriate responses to questions
- Poor intelligibility (varies with age)

- Underdeveloped play skills for age
- Tendency to overstuff food in mouth

Improving Speech

Good Speech Needs Good Hearing

Helpers

Motor Issues
- Fine motor – small muscle groups
- Gross motor – large muscle groups
- How infant takes nutrition, coordination, length of time
- Eyes: tracking symmetrical or deviant
- Surroundings: control and maneuver
- Appropriate use of markers/crayons and food utensils

Dyspraxia
- Partial loss of the ability to coordinate muscle movements

Formal Ways to Help Delayed Children
- Early Intervention – family centered
- Special Education – child centered

Early Intervention

Special Education

Oral Health Issues

Tongue Thrust Swallowing
- Child presses tongue forward against teeth each time there is swallowing; Normal rest position of the tongue
- Tongue thrust places great forward pressure against teeth, causing protrusive positioning
- Patterns: Anterior=tongue rests on lingual of max. teeth; Lateral=exaggerated pressure of tongue causes bite to close down, teeth can't erupt to fullest position; Fan=occurs from

molar to molar, tongue thrusts out occlusal surfaces, occlusal pressure only on first molars, refer to myofunctional or speech therapist

Myofunctional Therapy

Oral Sensitivity and Products

Tonsils and Adenoids

- Tonsils=palatine tonsil located in orapharynx "tonsil", adenoids=nasopharyngeal tonsil located at back of nasal cavity, lingual tonsil=located back of tongue, lingual tonsil and adenoid tissues are not readily visible
- Adenoids usually begin shrinking around 5 yrs, tonsils around 7 yrs, 6-7 yrs average age of T&A surgery
- Tonsils and adenoids can enlarge in nasal allergy patients
- Tonsil removal=repeated throat infections (7 or more sore throats in a year); tonsillar infection can spread to neck=peritonsillar abscess; one tonsil larger than another
- Adenoid removal=evaluate by radiograph and long mirror with illumination at back of throat to determine airway space; sleep apnea; persistent mouth odors; some studies indicate removal of t&a help w otitis media and om with effusion; hypo-nasality of voice
- Note tonsils for signs of infection or enlargement
- Is there enough space around uvula for speech production and swallowing (reduced airway space does not allow for normal airflow into oral cavity)
- Uvula in front of tonsil area usually sign of enlargement
- Is patient mouth breather
- Evaluate texture, cratering, fissuring along tonsil surface indicating bacteria collection areas
- Repeated bed-wetting episodes beyond age appropriateness, slow growth, child struggling with air while sleeping
- Irritability and lack of focus at middle to end of day due to lack of deep sleep
- Sleep apnea can result in developmental delays, and later in life, hypertension and heart disease

Pre-Reading and Reading Skills

- In kindergarten/first grade if warning signs present evaluate for learning problems:
- Rhyming
- Recognizing Letters
- Identifying sounds at beginning/middle/end of words
- Breaking words into sounds
- Blending sounds

Hygienist's and Dental Team Members' Role

- Don't interrogate parent, let parent offer information; let parent guide conversation
- Have information available in reception/education area

- Ask developmental questions on child's medical history form (including mealtime questions)
- Ask parent if there are any concerns regarding child that they would like information about
- DPH catchment area information
- Evaluate tonsil areas for enlargement (position of uvula, for swallowing and speech)
- Mouth breather
- Evaluate texture, craturing, fissuring of tonsillar surface for bacterial infection
- Ask parent/caregiver if bedwetting, slow growth, struggles to breath while sleeping/snoring, irritable/lacking focus at middle to end of day
- Education!!!!!

Developmental Milestones

This is by no means an exhaustive list of milestones, consult with your pediatrician or other medical professional if child does not seem to be at each level. Many children proceed at varying rates and are still completely within normal limits. This list is adapted from Pediatric Associates Well-Baby Checklist.

By **four** months child should
- Laugh, coo
- Inspect and play with hands
- Grasp objects and bring to mouth
- Follow objects from one side to another
- Lift head when on stomach
- Have a steady head when held upright

By **six** months child should
- Sit in tripod position (gross motor)
- Roll over (gross motor)
- Imitate familiar gestures (gross motor)
- Transfer objects from hand to hand (fine motor)
- Have hand/eye coordination (fine motor)
- Reach for objects (fine motor)
- Imitate familiar sounds (speech and language)

By **nine** months child should
- Sit alone (gross motor)
- Have no head lag when pulled to sit (gross motor)
- Bear weight on legs when supported (gross motor)
- Move around by rolling, crawling, and/or creeping (gross motor)
- Play hide-and-seek and peek-a-boo (speech and language, fine motor)
- Pincher grasp present (fine motor)
- Clap hands (fine motor)
- Manipulate two objects simultaneously (fine motor)
- Laugh and squeal (speech and language)

By **12** months child should
- Pull to stand (gross motor)
- Cruise around furniture (gross motor)
- Walk with help (gross motor)

May take steps alone (gross motor)
Continued refinement of fine motor skills seen at nine months
May say “mama”, “dada” specifically (speech and language

By **15** months child should
Walk alone (gross motor)
Run, climb, creep up stairs (gross motor)
May say 5 – 6 words clear (speech and language)

By **18** months child should
Run and climb well (gross motor)
Have improved coordination and balance (gross motor)
Begin to scribble/draw with large crayons, markers (fine motor)
May know 10 or more words and be clear (speech and language)

By **2** years child should
Jump and run (gross motor)
Climb steps holding the rail or hand (gross motor)
May put 2 words together (speech and language)
Respond to 2-part verbal commands (speech, language, and hearing)

By **3** years child should
Pedal tricycle (gross motor)
Count to 3 (speech and language)
Copy a circle (fine motor)
Know his/her age (speech and language)
Dress and undress self with simple clothing (fine and gross motor)
Uses plurals (speech and language)
Has active imagination and speaks about it (speech and language)

By **4 – 5 years** child should
Be toilet trained (fine and gross motor)
Draw shapes, figures (fine motor)
Speak in sentences (speech and language)
Count, know ABC’s, know colors (speech and language)
Ride bike (gross motor)
Tie shoes (fine motor)
Know name, address, telephone numbers (speech and language)

Language Milestone Chart

Speech Begins, 6 – 12 months

S – simple	B – babbling
P – play	E – energetic
E – exploration	G – grabbing and groping
E – examination	I – imitation of
C – cries	N – noises and
H – habitual	S – sounds

Words Emerging, 12 –18 months

W – welcomes	E – early
O – over includes	M – meanings

R – rejects
D – dadas
S – specifics

E – essentially
R – referential
G – grammer
I – includes
N – natural
G – gestures

Messages Evolve, 18 mo – 2 years

M – meanings
E – emerge
S – sequences
S – singles
A – and
G – groups
E – equal
S – syntax

E – expanded
V – vocabulary
O – object
L – label
V – verb
E – elaborations

Never-Ending Questions, 2 – 3.5 years

Negatives
Word Endings
Questions

Talking Over the Details, 3.5 – 4.5 years

Conversation
Getting rid of the mistakes

Discussing the Alternatives, school age

Discourse
Advanced conversation and Style Variation

From: Guidelines for Recognizing Delayed Language Development, Ear, Nose, Throat, Journal Vol. 58, July 1979

Oral Sensitivity

Many children are sensitive to oral stimulation. Different methods of touch and use of food textures may vary depending on child's response to tactile, oral stimulation. Children who experience hypo-or hyper-sensitivity need to be treated within the dental office with understanding.

Characteristics of Children with Oral Hypersensitivity

1. Limited food repertoire
2. Appears to avoid certain food textures
3. Doesn't like to have teeth brushed
4. Doesn't like to have face washed
5. Doesn't like body to be touched

6. Eats food from spoon or fork using only teeth and with lips retracted
7. Doesn't like messy sensory materials like fingerpaint
8. Doesn't like mixed textures
9. Gags easily
10. Uses fingertips when finger feeding or holding a spoon rather than grasping it with palm of hands
11. Want to wash the food down by taking a drink rather than by chewing it

Guidelines for Working with Children with Oral Hypersensitivity

1. Remember that the mouth is an extension of their total body
2. You may need to touch child's body before going near face/mouth/teeth
3. Always use firm pressure with slow movements
4. Describe what you are doing. Tell child exactly what and how you will be doing a procedure
5. Begin treating child by first making them comfortable with you by touching cheeks, jaw, then mouth/teeth

Similar techniques can be used for hyposensitive children, but you may need to "warm" the child with more stimulation, such as Nuk Brush, prior to treatment.

From: Oral-Motor Activities for Young Children, LinguSystems 1996

Speech and Language Pathologists/Myofunctional Therapists
Tongue Exercises

1. Tongue Exploring: Put tip of tongue behind upper incisors and wiggle around. Feel palatal rugae, feel hard and soft palate.
2. Teeth Sweep: Start at back of mouth on maxilla. Bring tongue around to other side of mouth by rubbing tongue along edges of teeth. Then reverse direction, do 8 times, and repeat on mandible.
3. Tongue Stretching: Open as wide as possible, then stick tongue out as far as possible. Hold it out briefly and then bring back in. Do 8 sets.
4. Up and Down: Point tongue out of mouth and then over top of upper lip. Repeat over lower lip. Do 8 sets.
5. Elevator: Open mouth comfortably wide. Place tongue on bottom of mouth and then slowly raise tongue to the top. Repeat. Do sets of 8.
6. Lick the Lips: Stick tongue out and touch tip to corner of lip. Move all around mouth licking lips. Reverse direction. Do sets of 8.
7. Roof Licks: Use tongue as paint brush to paint the roof of the mouth. Put tongue on rugae and bring up and back as if painting roof of mouth. Then bring forward. Do sets of 8.
8. Up and Chew: Tip of tongue on rugae. Pretend it is glued there and try to open and close mouth. Set of 8.
9. Push-Ups: Put tip of tongue on rugae. Push up as hard as possible and then drop tongue. Set of 8.

10. Ball Toss: Put tip of tongue in one cheek as if there was a ball there. Then move it to the other side. Do set of 8
11. Monkey Mouth: Put tongue between top lip and top teeth and then bottom lip and bottom teeth. Hold each position for count of 5 before changing. Do set of 8.
12. Tongue Clicks: Tip of tongue on rugae. Suck tongue up to make sound. Do sets of 8.

Workout for Little Ones

These are movements which help increase gross motor muscle groups. Play workout should be enjoyable, not stressful, stop if child becomes distressed. Adopted from Newsweek, Spring-Summer special issue, 1997.

Birth to 1 year:
Place child on back and rotate legs as if pedaling a bicycle.
Place child on stomach and encourage to lift head.
Place child on blanket or rug with toys in reaching distance and try to have child move body to grasp toys.

1 to 2 years:
Practice kicking large balls.
Play follow the leader together, especially through an obstacle course.
Climb stairs holding hands and then progress to walls/railings.

2 to 3 years:
Pedal and maneuver tricycle.
Throw balls into large basket or tub.
Practice walking forward on tiptoes, backwards, and standing on one leg.

The Special Issue of Newsweek Spring – Summer 1997 is an excellent resource for information on developmental issues for children from birth to age 3.

Ann-Marie C. DePalma, CDA, RDH, MEd, FADIA, FAADH, FADHA
depalmaannmarie@gmail.com
https://depalmaannmarie.com

QR Codes for Information/Products

BioGaia Oral Probiotics
https://www.biogaia.com

Curaden/Curaprox
https://curaprox.us

Sipify – Straw
https://sipify.me

Elevate Oral Care
https://www.elevateoralcare.com

Presto Smile
https://www.prestosmile.com

Medical/Dental Insurance Billing

Kandra Sellers – Kandra@tipsmedicalbilling.com

Christine Taxin – ctaxin@links2success.biz

Leslie Icenogle - https://insurancebillingoutsourcing.com

Dilaine Gloege - https://tidewaterdentalconsulting.com

eAssist – Dental Billing/Insurance Verification/PPO Fee Negotiation
https://dentalbilling.com

MyDentalSOP

Ann-Marie's Feedback – Use Code CALL

https://depalmaannmarie.com

depalmaannmarie@gmail.com

If you have questions or would like Ann-Marie to speak at a local event or provide training in your practice/area, contact her via email or website.