

Communication and Language in Children with ASD

An overview of what families and other team members should know about early indicators, ongoing challenges, & strategies to promote language in everyday activities

Special thanks to Dr. Carol Page, SCATP, for AAC information and slides

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TECS: Team for Early Childhood Solutions

CDC: "Learn the signs. Act early." CRA

Center for Disability Resources, University of South Carolina,

Dept. of Pediatrics, School of Medicine

ational Research Council - Windows Internet Explorer

http://sites.nationalacademies.org/NRC/index.htm

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autism Search

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Welcome to the National Research Council



The National Research Council (NRC) functions under the auspices of the National Academy of Sciences (NAS), the National Academy of Engineering (NAE), and the Institute of Medicine (IOM). The NAS, NAE, IOM, and NRC are part of a private, nonprofit institution that provides science, technology and health policy advice under a congressional charter signed by President Abraham Lincoln that was originally granted to the NAS in 1863. Under this charter, the NRC was established in 1916, the NAE in 1964, and the IOM in 1970. The four organizations are collectively referred to as the National Academies.

The mission of the NRC is to improve government decision making and public policy, increase public education and understanding, and promote the acquisition and dissemination of knowledge in matters involving science, engineering, technology, and health. The institution takes this charge seriously and works to inform policies and actions that have the power to improve the lives of people in the U.S. and around the world.

Highlights

[Saving Women's Lives: Strategies for Improving Breast Cancer Detection and Diagnosis](#)



[Visualizing Chemistry Poster](#)

http://books.nap.edu/openbook.php?record_id=10017&page=R1

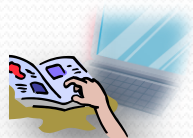
Educating Children with Autism
Committee on Educational Interventions for Children with Autism, Catherine Lord and James P. McGee, Editors

Objectives



Identify:

1. communication and language skills often seen in children with ASD
2. common receptive language needs and facilitating strategies for everyday activities
3. common expressive language needs and facilitating strategies for every day activities
4. helpful resources



AGENDA

Communication & Language in Children with ASD



- Overview of communication & language
- Receptive language characteristics
 - Facilitating comprehension – strategies for getting started
- Expressive language characteristics
 - Facilitating expressive language – strategies for getting started



OVERVIEW OF COMMUNICATION AND LANGUAGE

Introduction

- To communicate, we have to:
 - comprehend language
 - express language
 - to interact with others



Introduction



- Typical development = learning to
 - ☑ comprehend language that is verbal and nonverbal
 - ☑ express language verbally and nonverbally
 - ☑ in order to communicate with others

- Children with ASD commonly have deficits affecting most aspects of communication but these vary from child to child--no 2 children learn exactly the same way



From CDC's "Learn the signs. Act early." Campaign

From Talkability, Sussman, 2006, Hanen Program, p. 3

©Hanen Early Language Program, 2006. Adapted from: TalkAbility™ (Sussman, 2006), a Hanen Centre publication. No further copying or reproduction permitted without written permission from The Hanen Centre.

Visual Learner:

- Likes puzzles
- Likes to draw
- Enjoys building with blocks or Legos
- Remembers what he sees (e.g., knows route to someone's house)
- Likes to watch game shows that use letters
- Likes books
- Can read some words

Verbal Learner:

- Speaks like an adult
- Has a good vocabulary
- Likes to list the things he's interested in (e.g., names of countries, dinosaurs or action heroes)
- Likes to talk about what's going on now or what happened in the past
- Sometimes uses memorized phrases or sentences
- Often initiates conversations
- Likes conversations that he initiates

From Talkability, Sussman, 2006, Hanen Program, p. 12

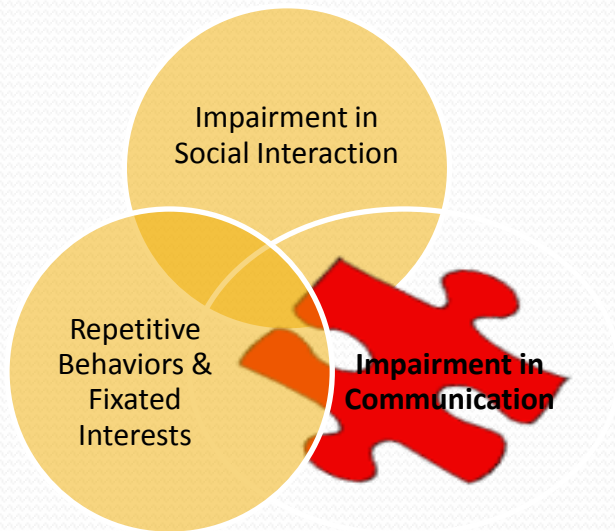
©Hanen Early Language Program, 2006. Adapted from: TalkAbility™ (Sussman, 2006), a Hanen Centre publication. No further copying or reproduction permitted without written permission from The Hanen Centre.

1. I ask my child a lot of questions yes/no
2. I often tell my child what to do or say yes/no
3. I decide what my child and I will play or talk about yes/no
4. I let my child choose the games we play yes/no
5. I talk about what my child wants to talk about yes/no
6. I speak softly when I talk to my child yes/no
7. I speak loudly when I talk to my child yes/no
8. I am very animated when I talk to my child yes/no
9. I like to play quiet games, like board games, with my child yes/no
10. I like to play rough and tumble games with my child yes/no

When we meet children who later go on to have diagnoses of ASD, what might their communication look like?



It can be easy to miss a child with autism

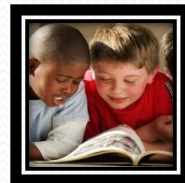


Communication and language characteristics commonly seen include:



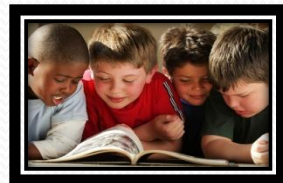
- Lack of or reduced joint attention - often do not communicate in order to share focus and interact with others
 - results in delays and differences in language development in children with ASD
 - use language most often to communicate wants and needs (by requesting or protesting)

Characteristics (continued):



- Difficulty with specific language and related skills, can affect other skills, like:
 - understanding verbal and nonverbal communication
 - using verbal and nonverbal communication
 - literacy skills
 - the ability to problem solve and self monitor goal-directed behavior
 - higher level or symbolic play

ASHA, 2006



Characteristics (continued):

- Differences and delays in **specific components** of receptive and expressive language, especially in:
 - Semantics (content or meaning), involving:
 - knowledge of vocabulary;
 - ability to express and understand concepts about objects and events, and relations among these objects and events

Paul, 2007; ASHA, 2006



Characteristics (continued):

- Pragmatics (language understood or used for social communication) involving:
 - using language for various purposes or communicative intents (e.g., to comment, ask, direct, share, take turns, converse)
 - discourse skills (turn-taking, topic maintenance, topic change) and
 - flexibility to modify communication for different listeners and social situations



Characteristics (continued):

- When speech is present, a relative strength is usually expressive language “form”
- May use sentence structures and grammar at a higher level than understanding of words used
 - **Form (syntax, morphology, and phonology):**
grammar or sounds produced in words

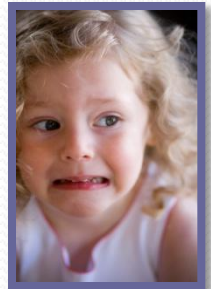
Paul, 2007



Characteristics (continued):

- Expressive language often includes immediate or delayed echolalia
- Speech usually has unusual intonation, pitch, rate, rhythm, volume, and other differences

Paul, 2007



Characteristics (continued):



- Nonverbal children with ASD:
 - may not develop intelligible speech, or may develop speech at a slower rate than peers
 - typically do not spontaneously replace speech with communicative gestures and pointing, and
 - use fewer conventional gestures and fewer pointing than typically developing peers

Early or subtle communication

- Recognize how and what your child communicates - so we can reinforce that!

Ways your child may communicate

crying
smiling
laughing
turning away
making vowel sounds (like “aahh,” “eeee”)
looking at you
copying the sounds you make
using facial expressions
reaching
pointing
pushing things away

giving things to you
showing things to you
shaking head “no”
waving “bye bye”
making consonant and vowel sounds (like “bah bah”)
with gestures
pantomiming part of a routine acting out what they are saying
using sounds that stand for words
using words
combining words together

What your child's communication may mean

Requesting help
Asking you to do an action
Asking for an object
Protesting that they do not want an object
Protesting that they do not want to do an action
Wanting you to notice him/her
Showing off for attention
Greeting by waving “hi” or “bye-bye”

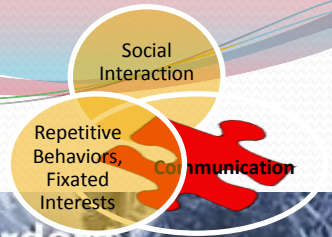
Requesting comfort
Requesting a social game like peek-a-boo
Request permission to carry out an action
Wanting you to notice an action or object
Commenting about an object
Commenting about an action
Asking a question to gain information



From Wetherby (ASHA, 2009)

Red Flags of Autism Spectrum Disorders and Developmental Delays

in the second year of life



Impairment in Social Interaction

- Inappropriate gaze
- Lack of warm, joyful expressions
- Lack of sharing interests
- Lack of response to contextual cues
- Lack of response to name
- Lack of coordination of nonverbal communication

Repetitive Behavior & Fixated Interests

- Repetitive movements with objects
- Repetitive movements or posturing of body
- Lack of playing with variety of toys
- Unusual sensory exploration
- Excessive interest in particular toys

Impairment in Communication

- Lack of showing
- Lack of pointing
- Unusual prosody
- Lack of Communicative consonants
- Using person's hand as a tool

Emotional Regulation

- Distress over removing objects
- Difficulty calming when distressed
- Abrupt shifts in emotional states
- Unresponsive to interactions



First Signs®



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Who We Are



Concerns About
A Child



Screening



Diagnosis &
Treatment

Our Mission

First Signs is dedicated to educating parents and professionals about the early warning signs of autism and related disorders.

With developmental, behavioral, and learning disabilities on the rise, there is much that remains poorly understood, from cause to cure. However, there is one widely accepted fact: early and

What's new and worth knowing about...

Just released: *The First Year®: Autism Spectrum Disorders: An Essential Guide for the Newly Diagnosed Child*, by founder and president, Nancy D. Wiseman (Da Capo Press, 2009).

[\[Read more information and reviews\]](#) [\[Read an excerpt\]](#) [\[Read the Table of Contents\]](#) [\[Order online\]](#)

Special offer now through January 2010. Order a *First Signs Screening Kit*, receive a 25% discount, and a complimentary copy of the book, *The First Year: Autism Spectrum Disorders: An Essential Guide for the Newly Diagnosed Child*. [Get more]



Once children learn to use functional spoken words and form sentences, they learn to **initiate and sustain conversation** about a shared topic over many exchanges of turns. The ability to initiate and maintain a conversation begins with joint attention on objects and events and social reciprocity. Infants first learn to exchange turns and coordinate attention during social games, such as peek-a-boo, looking at books, or playing with toys. During these early social activities children learn to follow the attentional focus of others as well as draw others' attention to things that are interesting. This back and forth sharing is foundational for conversation. Because of the

- Overview
- Social Interaction
- Communication
- Repetitive Behaviors and Restricted Interests
- Regulatory and Sensory Systems
- Treatments
- Outcomes

- Expressive and Receptive Language
- Conversation
- Repetitive Language
- Make Believe Play

▼ TYPICAL



Initiating and Sustaining Conversation

1 2

L & R: Copyright © 2009 by Florida State University. All rights reserved.

Typical child at 27 months has good use of gestures and eye gaze, easily initiates a conversation with his mom and the clinician, and he is beginning to learn how to sustain the conversation. Even though he is only 27 months, you

▼ RED FLAGS FOR ASD

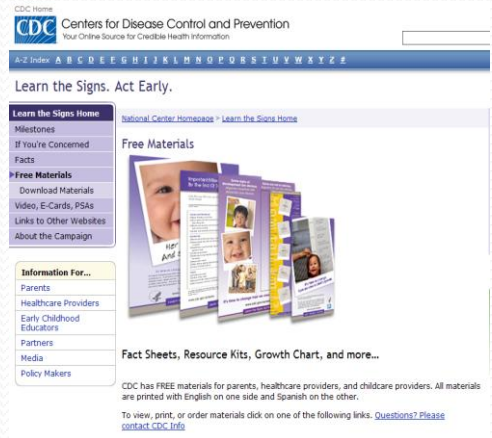


Child with ASD at 3 years is initiating conversation, but she is not responding to comments made by the clinician. In addition, she is very repetitive and rarely directs eye gaze to the clinician.

Educational Resources: Print

FREE Resource Kits

- Health Professionals
- Parents
- Early Educators
- Outreach



The screenshot shows the CDC Act Early website. At the top, it says "CDC Home" and "Centers for Disease Control and Prevention". Below that is a search bar and a navigation menu with letters A-Z. The main heading is "Learn the Signs. Act Early." There are two main columns of content. The left column has a "Learn the Signs Home" link, followed by "Milestones", "If You're Concerned", "Facts", and "Free Materials". The "Free Materials" section lists "Download Materials", "Video, E-Cards, PSAs", and "Links to Other Websites About the Campaign". Below this is an "Information For..." section with links for "Parents", "Healthcare Providers", "Early Childhood Educators", "Partners", "Media", and "Policy Makers". The right column has a "National Center Home" link and a "Free Materials" section. This section features a stack of colorful brochures and a "Fact Sheets, Resource Kits, Growth Chart, and more..." link. At the bottom, there is a paragraph stating "CDC has FREE materials for parents, healthcare providers, and childcare providers. All materials are printed with English on one side and Spanish on the other." and a link to "Questions? Please contact CDC. Info".

www.cdc.gov/actearly
click on “Free Materials”

Health Care Professional Resource Kit

Some signs of development are obvious. Always no sign for obvious. Algunas manifestaciones del desarrollo son obvias.

Some are not so obvious. Always no sign for obvious. Algunas manifestaciones del desarrollo son obvias.

It's time to change how we view a child's growth.

It's time to change how we view a child's growth.

Learn The Signs. Act Early.





Learn The Signs. Act Early.

It's time to change how we view a child's growth.

Learn The Signs. Act Early.

Stand with 200 Informational Cards

Packaged in sealed white box (12x9x3" box); approximately 4 lbs.

Developmental Screening FACT SHEET

Important Milestones By The End of 2 Years (24 Months)

Autism Spectrum Disorders FACT SHEET

What are red flags for autism spectrum disorders?
 Autism spectrum disorders (ASDs) are a group of developmental disabilities that can affect the brain. Symptoms can vary widely, often appearing in the first 3 years of life, but sometimes later in childhood. There are many different types of autism spectrum disorders, but they all share some common features, such as difficulty with social interaction and communication. There are many different types of autism spectrum disorders, but they all share some common features, such as difficulty with social interaction and communication.

What are the signs of ASD?
 People with autism spectrum disorders may not understand and respond to the way they are spoken to. They may have trouble with language and social skills. They may have trouble with language and social skills. They may have trouble with language and social skills.

Learn The Signs. Act Early.

www.cdc.gov/actearly

Set of 15 Fact Sheets (Milestones by Age; Disability Facts; Screening & Resources)

It's time to change how we view a child's growth.

It's time to measure your child's height and weight. But you should measure only once your child is growing.

Learn The Signs. Act Early.

www.cdc.gov/actearly



Small Posters (3)

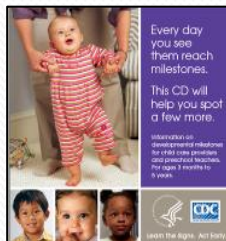
Early Educator Resource Kit



Flyers for Parents (50)



Small Posters (3)



CD-ROM

- Fact sheets
- Milestones checklists
- Tips for talking to parents

Growth Charts (3)

Packaged in sealed white 9x12" envelope

Spanish-Language Information



Es hora de ver el crecimiento de los niños de una manera...

Hoja informativa de indicadores importantes a los 12 meses

Para obtener un mejor nivel de desarrollo de su niño, asegúrese de tener un niño sano y feliz. Los niños necesitan un hogar seguro y amoroso. El niño debe estar libre de enfermedades y lesiones. El niño debe estar libre de drogas y alcohol. El niño debe estar libre de violencia. El niño debe estar libre de abuso. El niño debe estar libre de negligencia. El niño debe estar libre de explotación. El niño debe estar libre de tráfico humano. El niño debe estar libre de trata de personas. El niño debe estar libre de esclavitud. El niño debe estar libre de explotación sexual. El niño debe estar libre de explotación laboral. El niño debe estar libre de explotación económica. El niño debe estar libre de explotación cultural. El niño debe estar libre de explotación política. El niño debe estar libre de explotación religiosa. El niño debe estar libre de explotación científica. El niño debe estar libre de explotación tecnológica. El niño debe estar libre de explotación ambiental. El niño debe estar libre de explotación espacial. El niño debe estar libre de explotación cósmica.

¿Cómo se desarrolla el niño a los 12 meses?

- El niño debe estar libre de enfermedades y lesiones.
- El niño debe estar libre de drogas y alcohol.
- El niño debe estar libre de violencia.
- El niño debe estar libre de abuso.
- El niño debe estar libre de negligencia.
- El niño debe estar libre de explotación.
- El niño debe estar libre de tráfico humano.
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- El niño debe estar libre de explotación ambiental.
- El niño debe estar libre de explotación espacial.
- El niño debe estar libre de explotación cósmica.

¿Cómo se desarrolla el niño a los 18 meses?

- El niño debe estar libre de enfermedades y lesiones.
- El niño debe estar libre de drogas y alcohol.
- El niño debe estar libre de violencia.
- El niño debe estar libre de abuso.
- El niño debe estar libre de negligencia.
- El niño debe estar libre de explotación.
- El niño debe estar libre de tráfico humano.
- El niño debe estar libre de trata de personas.
- El niño debe estar libre de esclavitud.
- El niño debe estar libre de explotación sexual.
- El niño debe estar libre de explotación laboral.
- El niño debe estar libre de explotación económica.
- El niño debe estar libre de explotación cultural.
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- El niño debe estar libre de explotación religiosa.
- El niño debe estar libre de explotación científica.
- El niño debe estar libre de explotación tecnológica.
- El niño debe estar libre de explotación ambiental.
- El niño debe estar libre de explotación espacial.
- El niño debe estar libre de explotación cósmica.

¿Cómo se desarrolla el niño a los 24 meses?

- El niño debe estar libre de enfermedades y lesiones.
- El niño debe estar libre de drogas y alcohol.
- El niño debe estar libre de violencia.
- El niño debe estar libre de abuso.
- El niño debe estar libre de negligencia.
- El niño debe estar libre de explotación.
- El niño debe estar libre de tráfico humano.
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- El niño debe estar libre de explotación ambiental.
- El niño debe estar libre de explotación espacial.
- El niño debe estar libre de explotación cósmica.

- Resource kits (all materials double-sided with English on one side, Spanish on the other)
- Website – www.cdc.gov/pronto
- 1-800-CDC-INFO

www.cdc.gov/pronto

Aprenda los signos. Reaccione pronto.

www.cdc.gov/pronto

Aprenda los signos. Reaccione pronto.



FIRST WORDS[®] PROJECT



[What Is FIRST WORDS PROJECT?](#)

[Early Identification of Communication Delays](#)

[Autism Spectrum Disorders](#)

[Research](#)

[For Parents](#)

[For Healthcare and Childcare Providers](#)

[Related Websites](#)



The FIRST WORDS[®] Project is a longitudinal research investigation in the Autism Institute in the College of Medicine at Florida State University. Our major goal is to identify early red flags of developmental language disorders, autism spectrum disorders, and other communication delays in children under 24 months of age. Through our research findings, we aim to improve screening tools and early detection of communication disorders by maximizing the role of the family, which will help families obtain intervention services sooner.

The FIRST WORDS[®] Project has received support for research from the National Institutes of Health, Institute on Deafness and other Communication Disorders and Eunice Kennedy Shriver National Institute of Child Health & Human Development; the Centers for Disease Control and Prevention; the U.S. Department of Education, Office of Special Education Programs and Institute of Education Sciences; the Jessie Ball duPont Fund, Jacksonville, Florida; the Phillips Endowment; Todd and Annie Trimmer; and Delta Airlines.

MedlinePlus - Search Results for autism

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Clusters

All Results (114)

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- Mental Health (2)

Autism

Autism is a disorder that is usually first diagnosed in early childhood. The main signs and symptoms of autism involve communication, social interactions and repetitive behaviors.

Children with autism might have problems talking with you, or they might not look you in the eye when you talk to them. They may have to line up their pencils before they can pay attention, or they may say the same sentence again and again to calm themselves down. They may flap their arms to tell you they are happy, or they might hurt themselves to tell you they are not. Some people with autism never learn how to talk. [Read more](#)



Results 1 - 10 of 316 for autism

- Autism** National Library of Medicine
Autism is a disorder that is usually first diagnosed in early childhood. The main signs and symptoms of autism involve communication, social interactions and repetitive behaviors. Children.
www.nlm.nih.gov/medlineplus/autism.html - Health Topics

MedlinePlus.gov

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Your source for health services in your community.

http://www.hendersonhealth-sc.org/goLocal/goLocal?OC.plp?hd=153&county_id=46

Autism Services for York County: GoLocal-SC

goLocal south carolina
An online guide to local health resources

Search Go Local Resources
Enter a topic here

Search on Health-SC | Go Local | Autism | York County | Autism Services for York County

Autism Services for York County

Resources in York County (24)

- Adult Day Care Services (2)
- Counselors/Therapists (3)
- Psychiatrists (3)
- Clinical Social Workers (3)
- Group Homes (1)
- Psychologists (3)
- Community Clinics (3)
- Mental Health Clinics Programs (3)

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Regional resources also serving York County (12)

- Advocacy Services (2)
- Referral Services (1)
- Support Groups (2)
- Disability Programs (2)
- Respite Care Services (3)
- Home Health Care Services (1)
- Speech Therapists (1)

Resources serving all of South Carolina (63)

- Advocacy Services (8)
- Genetic Counselors (1)
- Pediatricians (4)

This state icon indicates services that are provided

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Clusters

All Results (114)

- Genetics (2)
- Mental Health (2)

Autism

Autism is a disorder that is usually first diagnosed in early childhood. The main signs and symptoms of autism involve communication, social interactions and repetitive behaviors. Children.

Results 1 - 4 of 4 for autism

- Autism - Multiple Languages - MedlinePlus**
Autism - Multiple Languages Russian (Русский) Somali (af Soomaali) Spanish (español) Russian (Русский) Autism - English Аутизм - Пыцово (Russian) Multimedia Healthy Roads Media ...
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www.nlm.nih.gov/medlineplus/languages/all_healthtopics.html - Multiple Languages

Clusters for this search.

What do we know about intervention?



NRC, 2001: www.nap.edu; Wetherby, 2009; Wetherby, Woods, and Lord, downloaded 12/09

[http://www.thehelpgroup.org/pdf/LORD PART%201_2.pdf](http://www.thehelpgroup.org/pdf/LORD_PART%201_2.pdf)

What do we think makes a treatment for ASD work?

- Early is better.
- Individualized goals.
- Target core deficits and strengths.
- Monitor progress and flexibility in approach (3 months).

Other possible ingredients

- Intensity matters (25 hours a week to mirror school; how much for younger kids?)
- Active engagement
- Low student/teacher ratio
- Family participation

NRC (2001) , Meaningful communication outcome measures:

- Initiates spontaneous communication in functional activities
- Generalizes gains across activities, interactions (adults and peers), and environments

Research tells us that....

Intensity matters...

...so how do we achieve 25 hours per week in which the child is engaged *actively* and *productively* in meaningful activities?

(National Research Council, 2001)

For meaningful communication, six kinds of instructions should have priority:

- Functional, spontaneous communication
- Social instruction in various settings
- Teaching of play skills focusing on appropriate use of toys and play with peers
- Instruction leading to generalization and maintenance of cognitive goals in natural contexts
- Positive approaches to address problem behaviors
- Functional academic skills when appropriate

NRC, 2001; Wetherby, 2008; Wetherby, 2009

General Framework

**Activities that may be included
integrated in Early Social Interaction:**

ESI Activity Categories

Play with Toys Blocks, Puzzles, Sand box, Playdough, Cars and Trucks, Ball Games, Baby Dolls	Play with People Social Games like Peek-a-boo, Rough and Tumble, Songs & Rhymes
Meals and Snacks Preparation, Eating, Cleanup	Caregiving Dressing, Diaper Change, Bath, Washing Hands, Brushing Teeth
Book Sharing	Family Chores Mailbox, Laundry, Care for Pets, Plants

Increase Active Engagement with Activity Structure and Supports

- ❖ Clear beginning, middle, and end
- ❖ Joint focus of attention and joint interaction
- ❖ Clear roles for child and partner with balance of turns
- ❖ Predictability within and across activities
- ❖ Repeated and varied opportunities for language learning

A Closer Look: RECEPTIVE LANGUAGE



Children with ASD may have substantial delays in receptive language ability.

- Examples: concepts related to time, directional concepts, questions (Who, What, when, Where, Why), functional use of math concepts, advanced sentence structures
- They may compensate with strengths in other areas such as visual memory or rote memory.

Beukelman & Mirenda, 2005



- **Some strategies to try to improve receptive language:**
 - Use your child's strengths such as visual skills.
Example: when giving an assignment or direction, include visuals – pictures or objects, such as to explain math or vocabulary concepts, to explain something new, to teach a new task. **Use items you already have, with everyone, during everyday activities. Make your own Powerpoint books with real photos.**
 - Always include activities that are successful. Example: some children may do better on tasks that call for rote memorization, like counting, or telling their name, so include this **at appropriate times.**



This could look like....



Pick the concept or direction you want to practice

Concept of fast/slow, or big/little

Steps in readying to go outside, or to next class

Learning about mammals

Decide when/how you'll set it up

Pick everyday activity
a.m., _____, _____

How will you use a strength like counting, visuals, cars

Include something successful, like jumping, sitting on a ball, **turning pages**

Help your child understand


Stress key words

Slow rate of talking

Say less-- use simple routine repetitive language, include choices

Include activities, items, comments your child likes

Show with actions, gestures, facial expressions, eye gaze



Receptive (and expressive) vocabulary is often restricted to nouns or object labels

- Other words like action words or verbs, modifiers such as adjectives, and adverbs, develop later in children with ASD. These other words tend to be more abstract and require being able to identify and interpret another person's focus of attention and intention

ASHA, 2006



Strategies to try:



Pick the words
you want to
practice

Adjectives,
adverbs,
verbs

Decide
when/how you'll
set it up

Pick everyday activity
a.m., ____, __

How will you use a
strength like
counting, visuals, cars

Include something
successful, like
counting, jumping,
turning pages

Help your child
understand

Stress key words, slow rate
of talking, say less

Include activities, items,
comments your child likes

Show with actions, gestures,
facial expressions, eye gaze

Get your child to look at you

Wait

Sabotage

Children may not understand conventional meaning of words or phrases but may instead hear a word or “chunk” of language (ASHA, 2006).

- ❑ **Strategies to try:** Stress key words (e.g., when outside, teacher says “Throw the ball”) to help him attend to key word and not phrase. Use key word in several activities, with several items, etc., to promote generalization.
- ❑ Try slower or deliberate rate of speech to help with auditory processing of targeted words.
- ❑ As language comprehension improves, literacy and reading comprehension improves too (ASHA, 2006). The 2 activities can be used to reinforce each other.



Children with ASD show literalness in their understanding of language (Paul, 2007; ASHA, 2006).

- Children may have trouble understanding that words can have multiple meanings, or can have different interpretations in different contexts like jokes. This type of skill may also affect the ability to apply information learned in one situation to another.
- **Strategies to try:** Include visuals (print/pictures) to help children understand words or concepts that are not concrete; teach specific words and concepts in several activities, to help with generalization.



Students with ASD have difficulty understanding nonverbal communication of others (ASHA, 2006).

- This may include facial expressions, gestures, eye gaze, or body postures of others, and taking the perspective of others, such as to understand how others think and feel (Beukelman & Mirenda, 2005).
- **Strategies to try:** When giving instructions or discussing a lesson, give specific or concrete information, use short repetitive language and predictable routines with to facilitate comprehension and participation; a partner may be helpful. Interpret how some one is feeling; include visuals and gestures.

Children may not respond as well in tasks requiring interpersonal interaction (Paul, 2007).

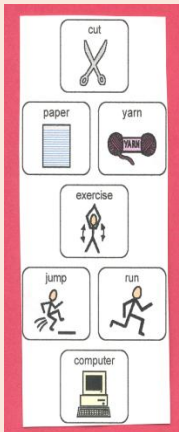
- Example: Student with ASD may not do as well when asked to answer classroom activity questions, directed to go to another person to get or deliver something, or directed to imitate someone (gesturally or vocally). They may have difficulty understanding various communicative intents of others.
- ❑ **Strategies to try:** To encourage participation in tasks that require interactions, try – involving a favorite activity or item (to promote joint attention), having a favorite activity naturally happen next as reinforcement, repetition and modeling, and including visual cues.
- ❑ Expand students' understanding of communicative intents -- such as with visuals to model "my turn," or other communicative intents



Children may show differences in related skills like sensory processing abilities, which affect their responsiveness. This might include over or under-responding or delayed response times (ASHA, 2006).

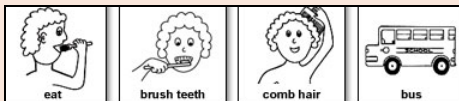
- **Strategies to try:**

- Review schedules or task sequence so students know what to expect; prepare them for changes that may happen, and try to reduce sensory issues students may have (e.g., may not respond as well to certain textured foods, toys, materials, etc.).
- Practice skills in a variety of activities and situations.
- Use simple input language (key words), and pause or provide a little extra time (time delay) to help students process information and respond.



As language comprehension improves, students with ASD may continue to need help to understand and know what to do especially in new situations; they may perseverate by continuing to use “old” strategies in new situations (ASHA, 2006).

- **Strategies to try:** Continue to teach specific words and concepts in new situations/settings to help with generalization, continue visual prompts (which can promote greater independence), with plans to systematically fade prompts. Add visuals to social stories, use visual schedules.



Summary

Ways to adapt activities to promote receptive language skills

- ✓ Teach in usually occurring activities and situations -- Teach specific skills in several activities, as they apply to various situations, allowing many opportunities to practice and to help with generalization. Include activities and items of interest and predictable routines to promote participation and learning. Include tasks that are usually successful for them.
- ✓ Use students' strengths, such as visual skills, during instruction with students with ASD -- Example: when giving an assignment, include visuals such as to picture concepts, word forms such as verbs, adverbs, and adjectives; concepts or words that are not concrete, and steps in a task.

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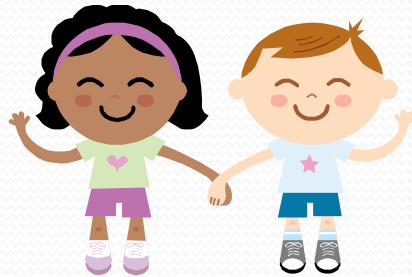
Summary

Ways to adapt activities to promote receptive language skills

- ✓ During interactions, use strategies to help children process information, attend to key words, and understand
 - ✓ It may be helpful to stress important words in several activities, beginning with activities of interest to the student.
 - ✓ Try slower or deliberate rate of speech, pause or provide a little extra time (time delay); and try simple input and routine, repetitive language (as in theme-based lessons) to help students process information.

Note: Specific teaching strategies may depend on the student's language level and related needs -- Collaborate with your speech-language therapist and other team members to individualize instruction that addresses students' specific receptive language needs.

A Closer Look: EXPRESSIVE LANGUAGE



What we know about speech development in children with ASD



- ✓ Lack of speech is often the most obvious symptom
- ✓ Difficulty vocalizing may contribute to lack of verbalizations-- children with ASD may have limited consonant inventory & use less complex syllabic structures; others may show adequate complexity of vocalizations (McHale et al., 1980; Stone and Caro-Martinez, 1990; Wetherby and Prutting, 1984; Wetherby et al., 1989).
- ✓ Limited speech can be a great cause of concern for parents
- ✓ For many families, having their child talk is a primary goal
- ✓ Children with ASD who learn to use spoken language as a primary means of communication have better outcomes (Howlin, 2005)
- ✓ **However, intensive intervention is key** -- some children with ASD who do not spontaneously begin speaking by late preschool period can still learn to do so with intensive intervention

What we know about speech development in children with ASD



- ✓ 10-15 yrs ago, approx 40% did not have functional spoken language
- ✓ Current estimates: 20-30% do not speak (Rogers, 2006); increased number of children entering school with functional speech because of earlier identification
- ✓ Use of AAC may always be a necessary adjunct to communication & may serve as transitional or more permanent mode of communication
- ✓ A main goal for SLPs (whose area of specialty is language, communication, and speech) and other team members – develop or reinforce meaningful spoken speech but not at the expense of language development

What we know about speech development in children with ASD



- ✓ A variety of approaches are beginning to show some efficacy both in increasing communication and developing first words from nonspeaking young children with ASD
- ✓ The evidence is not yet complete on how to facilitate spoken language. However, a “comprehensive program may be a way to increase the proportion of children with ASD who acquire the essential tool of spoken language” (Paul, 2009).
- ✓ This would include activities designed to :
 - ✓ **increase the frequency and range of communicative acts**
 - ✓ **include of AAC approaches**
 - ✓ include activities that require vocal and eventually verbal productions
 - ✓ **Train parents or other caregivers to provide opportunities for their child to engage in repeated practice of the use of new communicative forms and functions in everyday activities**

Students with ASD often have substantial delays and differences in expressive language (Paul, 2007; ASHA, 2006).

- Children with ASD who develop speech may use language that is sparse or repetitive. They often use expressive language for limited purposes, mostly to request or protest.
- **Strategies to try:**
 - Acknowledge and respond to all communicative attempts.
 - Use activities of interest that happen regularly (such as snack time, independent play, or favorite toys, books, or other items), to allow repeated opportunities for practice without drills; include pauses to encourage the student to communicate and participate.
 - Model vocabulary, simple sentence structures, and communicative intents (beyond requesting or protesting) such as to comment, get someone's attention, initiate interaction, etc.
 - Use pictured symbols, printed words, gestures, to prompt the student to say target words or sentences.



Expressive vocabulary in students with ASD is often in the form of nouns or object labels, with delays in combining words (such as saying “Cookie” instead of “more cookie”) (Paul, 2007; ASHA, 2006).

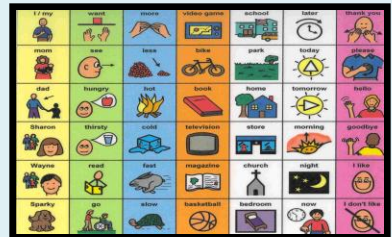
❑ **Strategies to try:**

- ❑ Model and stress key words and word combinations (e.g., student reaches for a cookie that is out of reach. Mom/Teacher points to the cookie and says “You want cookie. Cookie”)– also verbally interpreting and expanding the child’s communication.
- ❑ Teach words that the student may like, such as “jump” while jumping on a mini-trampoline.
- ❑ Use activities that will provide many opportunities for practice.
- ❑ Include picture symbols and printed words as prompts or to encourage new words..



Students with ASD show literalness in their expressive use of language (Paul, 2007; ASHA, 2006).

- Students with ASD usually have difficulty using abstract concepts (such as related to time, direction, and math) and higher level expressive language skills (such as expressive problem-solving, reasoning, explanations, and creative and figurative language).
- ❑ **Strategies to try:** Model and practice language in various situations and activities to promote generalization.
- ❑ Use picture symbols with printed words to prompt verbal labeling, explanations, and other higher level language skills. This can include social stories with pictures/print.



Many students with ASD exhibit echolalia (immediate or delayed). They may also use unconventional or idiosyncratic words, phrases, or sentences, or undesirable behaviors to communicate (ASHA, 2006; Wetherby & Prizant, 2000).

- Students may hear and repeat a word or “chunk” of language and associate this word or “borrowed” phrase with a specific experience or event. An echolalic utterance may be equivalent to a single word or may refer to a situation or event.
- **Strategies to try:** Interpret the communicative intent of echolalia or idiosyncratic words, and if this is possible, verbally acknowledge what the student is trying to communicate.
- Model conventional or more correct language.
- Teach language that expresses various communicative intents (e.g., words for commenting, asking, showing, expressing emotion, interacting, etc.).
- Continually expand expressive vocabulary and sentence structures in daily activities.

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What do you like to do in school?

I like...



art class



music



swimming



math



Expressive language may be limited in tasks requiring joint attention and interpersonal interaction (Paul, 2007; ASHA, 2006).



- **Strategies to try:** Encourage interactions even without speech.
- Use repetitive activities and modeling, giving many chances for practice and predictability.
- Encourage joint attention by involving a favorite activity; or plan for a favorite activity to naturally happen next (reinforcement).
- Teach communicative intents: e.g., prompting the student to call or get attention to initiate an interaction, such as to ask for help with something he likes.
- Include pictured/printed/gestured cues as prompts for the student to know what to say or do; practice “scripts” of what to say in various situations.

From Talkability, Sussman, 2006, Hanen Program

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Teaches conversational skills by focusing on ways to:

- ✓ Initiate
- ✓ continue, and
- ✓ end conversations
 - **with and without words**

Students with ASD may have delayed or limited speech, with reduced intelligibility (ASHA, 2006; Paul, 2007; Landa, 2007).



- Speech characteristics can include:
 - inconsistent articulation errors, limited consonant inventory, and simple syllable structures
 - fine and gross motor incoordination
 - vocal differences may also be present including monotone intonation, whispering, or using a quieter voice, abnormal pitch and rate.
- **Strategies to try:** Include alternate modes of communication, such as picture symbols with printed words (augmentative communication), along with repetitive predictable routines, to facilitate speech and language.

Summary

Ways to adapt activities to promote expressive language

- ✓ Provide instruction in activities of interest that happen regularly and with favorite items -- This allows repeated opportunities for practice. In these activities, teach words that the student may like, such as “jump” while jumping on a mini-trampoline. Include visuals and pauses to encourage the student to communicate and participate.
- ✓ Acknowledge and respond to all communicative attempts -- Recognize even subtle communication signals, and verbally interpret all communication attempts. Stress, model, and expand key words or vocabulary, word combinations, and communicative intents (beyond requesting or protesting). Try to interpret the communicative intent of echolalia or idiosyncratic words; if this is possible, verbally acknowledge what the student is trying to communicate, and model conventional or more correct language.

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Summary

Ways to adapt activities to promote expressive language

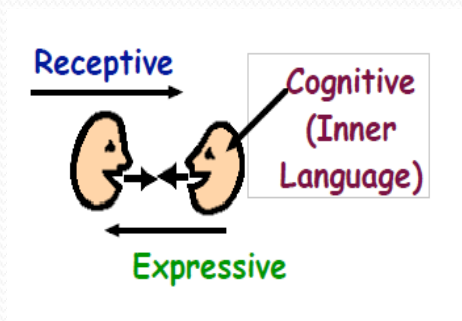
- ✓ Encourage use of alternate modes of communication, such as picture symbols with printed words (augmentative communication, or AAC) to facilitate speech and language -- AAC can be used as prompts to help students know what to say and how to say it, and as a way to develop language and communicate. AAC can be used to teach new words and concepts, to expand expressive vocabulary, sentence structures, and communicative intents, including to promote interactions.
- ✓ Specific teaching strategies may depend on the student's language level and other needs – Collaborate with your speech-language therapist and other team members to individualize instruction that addresses students' specific expressive language needs.

Why consider AAC?

- Allows multimodality communication and promotes language development
- Reduces frustration and behavior problems
- Makes language visual and more concrete
- Improves social interacting with peers
- Provides support for other emergent skills (i.e. literacy)
- Offers an option for communicating indefinitely if speech does not meet all communication needs

Why consider AAC?

- Allows children to learn through play and participate
- Provides a means of expanding expressive language
- Provides a way of improving receptive language
- Provides a means for cognitive processing



More References and Resources

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- Beukelman, D.R., & Mirenda, P. (2005). *Augmentative and Alternative Communication: Supporting children & adults with complex communication needs (3rd ed.)*. Baltimore, MD: Brookes Publishing.
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- Paul, R. (2007). *Language disorders from infancy through adolescence (3rd ed.)*. St. Louis, Missouri: Mosby Elsevier.
- Wetherby, A.M., & Prizant, B.M. (Eds.). (2000). *Autism spectrum disorders: A transactional developmental perspective (Vol. 9)*. Baltimore, MD: Brookes Publishing.
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- http://books.nap.edu/openbook.php?record_id=10017&page=R1
NRC reference, **Educating Children with Autism**, Committee on Educational Interventions for Children with Autism, Catherine Lord and James P. McGee, Editors
- <http://www.edpro.com>
Education Productions provides video training programs for early childhood educators who are working with children from birth to 8 years old.
- <http://www.hanen.org>
The Hanen Centre is committed to helping young children with or at risk for language delay to learn to communicate and interact effectively. This site offers resources and information about their Hanen workshops for parents, teachers, caregivers, speech language pathologists, and other early intervention professionals.
- <http://nccic.org>
The National Child Care Information Center promotes childcare linkages in order to support quality care and services for children and families. Click on "Child Care Topics" for links and resources about many different topics.
- <http://www.sinetwork.org/>
Sensory Integration Resource Center website is a useful site that provides a comprehensive list of online links such as sensory integration, resources for parents, educators and occupational therapists.
- <http://www.MedlinePlus.gov>
Website that parents and others can use to search for information about autism and local resources, in different languages.



- <http://ncld.org>

National Center for Learning Disabilities provides information about public awareness and understanding of children with learning disabilities. They offer a learning disabilities awareness checklist, provide early warning signs of learning disabilities and much more.

- <http://www.nectas.unc.edu>

National Early Childhood Technical Assistance System provides technical assistance to support states to improve services and results for children with disabilities and families.

- <http://npin.org/sitemap.html>


The National Parent Information Network provides information on Children's Health and Nutrition & Early childhood: Family-Peer relationships that are useful resources for parents.

- <http://tactics.fsu.edu>

Therapists as Collaborative Team Members for Infant-Toddler Community Services (TaTICS) is an outreach training project directed by Dr. Juliann Woods and funded by a U.S. Department of Education Grant. It shares tools useful in skillfully navigating the path toward provision of Part C Services using the child/family's daily routines, activities, and events as a context for assessment and intervention

- <http://zerotothree.org>

Zero to Three is a national non-profit organization in Washington D.C. whose goal is to increase public awareness about the significance of the first three years of life by bringing together the fields of medicine, mental health research science and child development. This site provides forums for professionals to communicate with other professionals in multidisciplinary fields, as well as resources on many topics.



More strategies to promote
receptive language in
classrooms or groups


Different ways to select activities and arrange the environment

(adapted from Noonan & McCormick, 2006 from Bricker & Norstad, 1990; Landa, 2007):

- Select activities that let you work on similar objectives for different students. *Example:* telling stories with props is an activity that lends itself to teaching identifying objects by their function (receptively, such as by pointing or sorting, or for others by talking).
- Select activities that let you work on more than one objective for the same student. *Example:* Joe has 3 objectives that can be taught during snack preparation: a language objective (“comprehending adjectives”), cognitive/pre-linguistic objective (“matching colors and shapes”), and fine motor/self-care objective (carrying out direction to “pour”).
- Select activities that can be adapted for varying age and skill levels.

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- Select activities that require minimal adult direction and assistance. *Example:* most independent-play activities and some clean-up routines require minimal direct assistance from adults, once they begin.
- Select activities that provide many opportunities for student initiations. *Example:* the activity “Up, up, and away” requires children to name a peer and then pass a balloon to that peer; each game provides many opportunities for children to initiate to peers. In the area of receptive language, the student has many opportunities to respond appropriately to peer initiations and can begin to understand how and what happens when he initiates interactions.
- Select activities that are motivating and interesting. Routines/activities that are fun and inherently reinforcing are more likely to keep students engaged and therefore learning in any skill area.




More strategies to promote
expressive language in
classrooms or groups

As for receptive language, **select activities and arrange the environment** (adapted from Noonan & McCormick, 2006 from Bricker & Norstad, 1990; Landa, 2007):

- Select activities that let you work on similar objects for different students. *Example:* telling stories with props is an activity that lends itself to teaching about objects by their function (using expressive language to label functions) and other objectives.
- Select group activities that let you work on more than one goals/objectives for the same student. *Example:* Joe has three objectives that can be taught in the context of snack preparation: a language objective (“naming adjectives”), a cognitive or pre-linguistic objective (“labeling colors and shapes”), and a fine motor/self-care objective (labeling or requesting “pour”).
- Select activities that can be adapted for varying age and skill levels.

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- 
- o Select activities that require minimal adult direction and assistance.
 - o Select activities that provide many opportunities for student initiations.
Example: the activity “Up, up, and away” requires children to name a peer and then pass a balloon to that peer; each game provides many opportunities for children to initiate communication with peers.
 - o Select activities that are motivating and interesting.