

Identifying and Treating Autism Spectrum Disorder in Young Children

A Developmental Pediatrician's Perspective



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Autism by the Numbers

- 1:88 Children have been identified with autism.
- Five times more common in boys.
- Largest increases in Hispanic and African-American children.
- Siblings of children with autism are at higher risk of developing autism

Did You Know?

- Most children are not identified until...

FOUR YEARS OLD

Did You Know?

- Parents identify concerns about their children by...

12-18 MONTHS

Did You Know?

- Autism can be reliably diagnosed in children...

**2 YEARS OLD
AND YOUNGER!**

Autism diagnosis in children less than 3 years old.

Multiple studies show that the diagnosis of autism when made in younger children IS stable over time.

- Cox, et. al 1999 J. Child Psychol Psychiatry 1999 Jul;40(5):719-32
- Stone 1999 J. Child Psychol Psychiatry 1999 Feb;40(2):219-26
- Lord 2006 Arch Gen Psychiatry 2006 June;63(6):694-701
- Chawarska 2007 J. Child Psychol Psychiatry 2007 Feb;48(2):128-38
- Stone 2007 J. Child Psychol Psychiatry 2007 Aug;48(8):793-802
- Kleinman 2008 J. Autism Dev Disorders 2008 April;38(4):606-15

Early intervention yields better
outcome.

Can early intervention PREVENT
the development of autism?

G. Dawson Dev Psychopathol 2008 Summer

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Is there a Downside to Early
Diagnosis?

Who Notices First?

- Parents
- Early Childhood Educators
- Speech and Language Therapists
- Pediatricians

Parents

Parental Concerns may be vague...

Parents may have explanations/rationalizations
for their child's behavior or deficit...

Little Einstein/Presidential syndrome...

“It’s easy to notice things babies do that are unusual. It’s harder to notice things that are missing.”

-Dr. Lauren Turner-Brown



Early Childhood Educators

National Association For the Education of Young Children (NAEYC)

- Review of website
- NO position statements or policy statements to do with
- identifying or working with young children with
- special needs
- Limited resources (2 books found) that discuss issues
- relating to children with special needs

Resources for Early Childhood Educators

- **CDC – Learn the Signs. Act Early**

- www.cdc.gov/actearly

- **“Go Out and Play!” Kit**

- The kit contains information about monitoring developmental milestones, suggestions for a safe and successful activity day, tips for talking to parents if you suspect a child has a developmental delay, and a pullout section with activities to share with parents for at-home play

Resources for Early Childhood Educators

- Center for Evidence Based Practice: Young Children With Challenging Behavior (TACSEI)

- www.challengingbehavior.org

- The Center on the Social and Emotional Foundations for Early Learning (CSEFEL)

- www.CSEFEL.vanderbilt.edu

- Zero to Three

- www.zerotothree.org

Speech and Language Pathologists

- “Speech-language pathologists who acquire and maintain the necessary knowledge and skills can diagnose autism spectrum disorders typically as part of a diagnostic team or in other multidisciplinary collaborations...”

- ASHA Position Statement
- Ad Hoc Committee on ASD
- 2006

For Educators and Speech Therapists

- What to say and how to say it:
 - Describe what you see.
 - Ask if the parent sees it too.
 - Ask for parent input.

“I think there may be some broader developmental issues here. Would you like me to call your pediatrician? Will you call him/her first to share these concerns and let him/her know I’ll be calling?”

Physician

- Current recommendations of the American Academy of Pediatrics:
 - screen for Autism at 18 and 24 months.

M-CHAT

Please fill out the following about how your child usually is. Please try to answer every question. If the behavior is rare (e.g., you've seen it once or twice), please answer as if the child does not do it.

- | | | |
|--|-----|----|
| 1. Does your child enjoy being swung, bounced on your knee, etc.? | Yes | No |
| 2. Does your child take an interest in other children? | Yes | No |
| 3. Does your child like climbing on things, such as up stairs? | Yes | No |
| 4. Does your child enjoy playing peek-a-boo/hide-and-seek? | Yes | No |
| 5. Does your child ever pretend, for example, to talk on the phone or take care of a doll or pretend other things? | Yes | No |
| 6. Does your child ever use his/her index finger to point, to ask for something? | Yes | No |
| 7. Does your child ever use his/her index finger to point, to indicate interest in something? | Yes | No |
| 8. Can your child play properly with small toys (e.g. cars or blocks) without just mouthing, fiddling, or dropping them? | Yes | No |
| 9. Does your child ever bring objects over to you (parent) to show you something? | Yes | No |
| 10. Does your child look you in the eye for more than a second or two? | Yes | No |
| 11. Does your child ever seem oversensitive to noise? (e.g., plugging ears) | Yes | No |
| 12. Does your child smile in response to your face or your smile? | Yes | No |
| 13. Does your child imitate you? (e.g., you make a face-will your child imitate it?) | Yes | No |
| 14. Does your child respond to his/her name when you call? | Yes | No |
| 15. If you point at a toy across the room, does your child look at it? | Yes | No |
| 16. Does your child walk? | Yes | No |
| 17. Does your child look at things you are looking at? | Yes | No |
| 18. Does your child make unusual finger movements near his/her face? | Yes | No |
| 19. Does your child try to attract your attention to his/her own activity? | Yes | No |
| 20. Have you ever wondered if your child is deaf? | Yes | No |
| 21. Does your child understand what people say? | Yes | No |
| 22. Does your child sometimes stare at nothing or wander with no purpose? | Yes | No |
| 23. Does your child look at your face to check your reaction when faced with something unfamiliar? | Yes | No |

Child's name: _____ Date of birth: _____ Date filled out: _____

Was birth premature? _____ If yes, how many weeks premature? _____

Filled out by: _____ Relationship to child: _____

Instructions for caregivers: This Checklist is designed to identify different aspects of development in infants and toddlers. Many behaviors that develop before children talk may indicate whether or not a child will have difficulty learning to talk. This Checklist should be completed by a caregiver when the child is between **6 and 24 months of age** to determine whether a referral for an evaluation is needed. The caregiver may be either a parent or another person who nurtures the child daily. Please check all the choices that best describe your child's behavior. If you are not sure, please choose the closest response based on your experience. **Children at your child's age are not necessarily expected to use all the behaviors listed.**

Emotion and Eye Gaze

1. Do you know when your child is happy and when your child is upset? Not Yet Sometimes Often
2. When your child plays with toys, does he/she look at you to see if you are watching? Not Yet Sometimes Often
3. Does your child smile or laugh while looking at you? Not Yet Sometimes Often
4. When you look at and point to a toy across the room, does your child look at it? Not Yet Sometimes Often

Communication

5. Does your child let you know that he/she needs help or wants an object out of reach? Not Yet Sometimes Often
6. When you are not paying attention to your child, does he/she try to get your attention? Not Yet Sometimes Often
7. Does your child do things just to get you to laugh? Not Yet Sometimes Often
8. Does your child try to get you to notice interesting objects—just to get you to look at the objects, not to get you to do anything with them? Not Yet Sometimes Often

Gestures

9. Does your child pick up objects and give them to you? Not Yet Sometimes Often
10. Does your child show objects to you without giving you the object? Not Yet Sometimes Often
11. Does your child wave to greet people? Not Yet Sometimes Often
12. Does your child point to objects? Not Yet Sometimes Often
13. Does your child nod his/her head to indicate yes? Not Yet Sometimes Often

Sounds

14. Does your child use sounds or words to get attention or help? Not Yet Sometimes Often
15. Does your child string sounds together, such as *uh oh, mama, gaga, bye bye, bada*? Not Yet Sometimes Often
16. About how many of the following consonant sounds does your child use:
ma, na, ba, da, ga, wa, la, ya, sa, sha? None 1-2 3-4 5-8 over 8

Words

17. About how many different words does your child use meaningfully that you recognize (such as *baba* for bottle; *gaggie* for doggie)? None 1-3 4-10 11-30 over 30
18. Does your child put two words together (for example, *more cookie, bye bye Daddy*)? Not Yet Sometimes Often

Understanding

19. When you call your child's name, does he/she respond by looking or turning toward you? Not Yet Sometimes Often
20. About how many different words or phrases does your child understand without gestures? For example, if you say "where's your tummy," "where's Daddy," "give me the ball," or "come here," without showing or pointing, your child will respond appropriately. None 1-3 4-10 11-30 over 30

Object Use

21. Does your child show interest in playing with a variety of objects? Not Yet Sometimes Often
22. About how many of the following objects does your child use appropriately: cup, bottle, bowl, spoon, comb or brush, toothbrush, washcloth, ball, toy vehicle, toy telephone? None 1-2 3-4 5-8 over 8
23. About how many blocks (or rings) does your child stack? **Stacks** None 2 blocks 3-4 blocks 5 or more
24. Does your child pretend to play with toys (for example, feed a stuffed animal, put a doll to sleep, put an animal figure in a vehicle)? Not Yet Sometimes Often

Do you have any concerns about your child's development? yes no If yes, please describe on back.

Surveillance and Screening Algorithm: Autism Spectrum Disorders (ASDs)

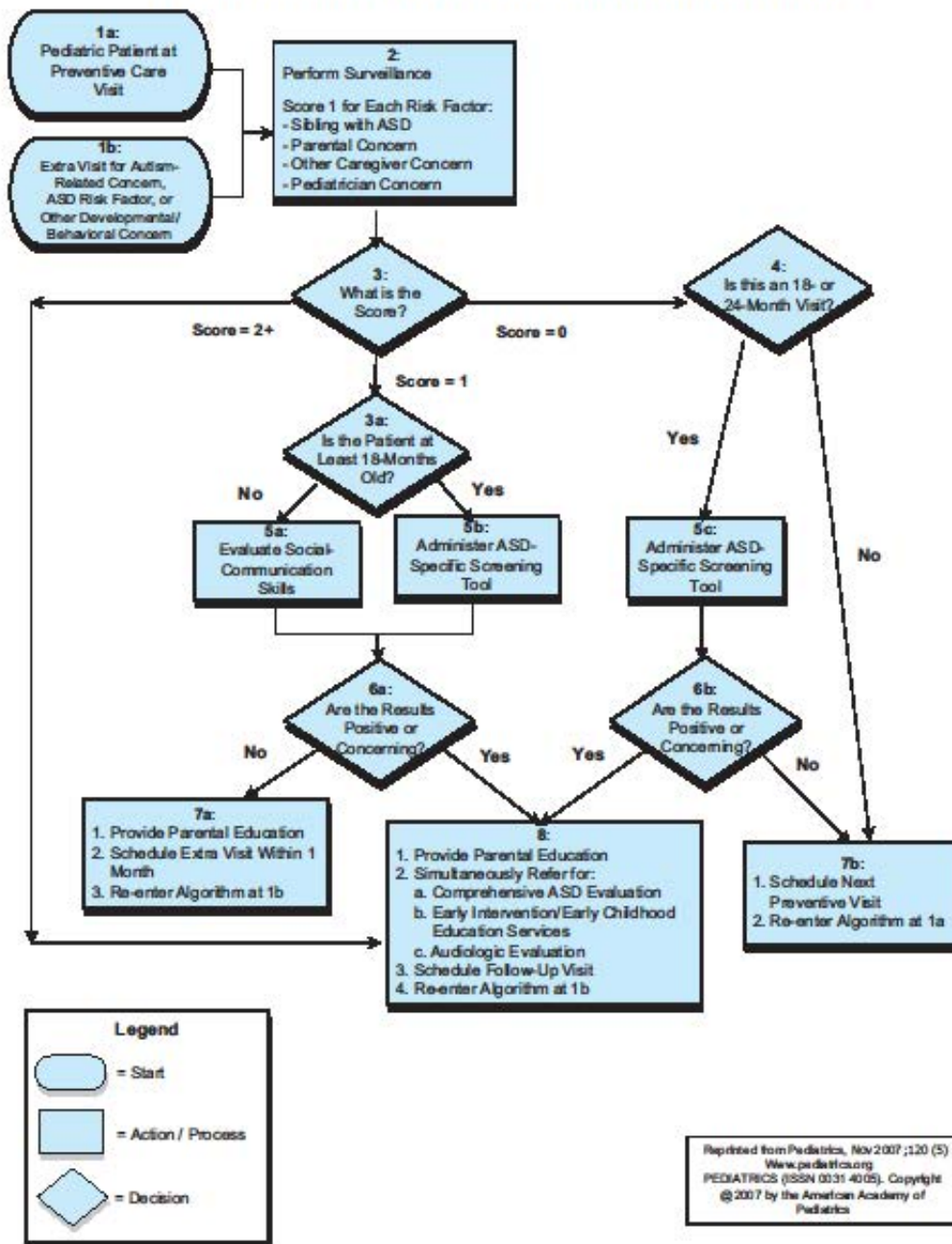


FIGURE 1
Surveillance and screening algorithm: ASDs. (Reproduced with permission from Pediatrics)

Physician

- The current recommendations of the American Academy of Pediatrics screen for Autism at 18 and 24 months.
- Need to ask the right questions.
 - Nonverbal communication skills.
 - Functional use of language.
 - Play.

Sample Questions

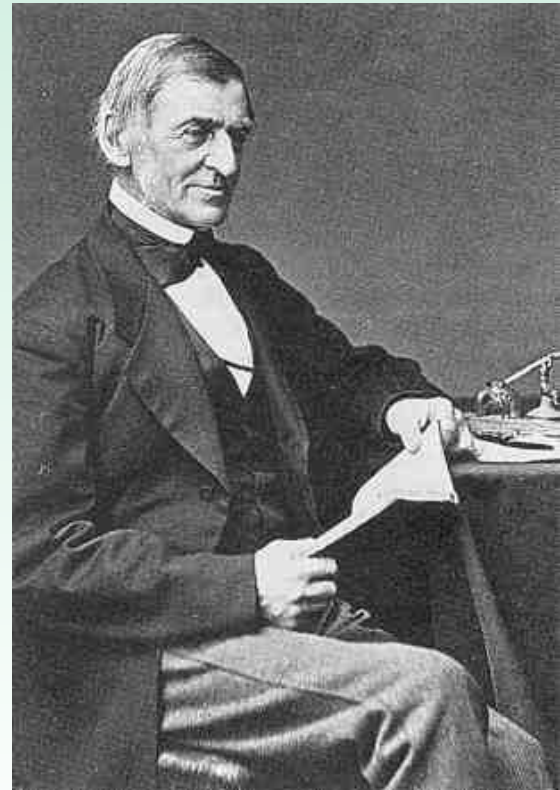
- How many words does your child say spontaneously (not repeating after you)?
- Does he use those words functionally?
- Does he point?
- Does he respond when his name is called? How and how often?
- How does he let you know what he wants?
- Does he share his interests with you...pointing out things on a walk, showing you toys?
- Does he show you things by looking at you, looking at the object, then looking back at you?
- What does your child do to play...what's fun for him?
- Does your child seek you out to play?
- Do you and your child play together?

Simple Things to do in the Office

- Roll a ball back and forth
- Point out an interesting toy
- Call the child by name
- Share an interesting toy with the child
- Look at a book with the child

“Knowledge is the antidote to fear.”

-Ralph Waldo Emerson, Essayist, lecturer, poet



“Named must your fear be before
banish it you can.”

Yoda, Jedi Master

Star Wars: The Empire Strikes Back



What to Look For

- Retrospective Studies

- Parental Report and Video Studies

- Delayed speech and language.
 - Lack of response when name called.
 - Lack of Imitation.
 - Poor use of gesture. (Pointing)

What Does Typical Development Look Like in infancy?

- 0 to 3 months
Sensitivity to and preference for faces and speech
- 3 to Six months
Emergence of dyadic social interaction
- Six to Nine months
More sophisticated facial processing skills
Response to name
Social games
- Nine to Twelve months
Social monitoring and imitation
Joint attention

- Autism Speaks
 - Video glossary

<http://autismspeaks.player.abacast.com/asdvideoglossary-0.1/autismspeaks/login>



Prospective Studies

•By 12-18 months children with autism differ in the following ways.

- Visual tracking (↓ attention to face and eyes of others.)
- Prolonged visual inspection of objects
- Limited response to name
- ↓ Eye contact
- ↓ Social Smiling
- ↓ Social interest
- ↓ Facial expression (not sharing affect with eye contact)
- Delayed gestural communication (pointing)
- Less back and forth babbling
- Limited interest in toys / repetitive play
- Decreased imitation

Centers for Disease Control

- Learn the signs – act early.
 - Not responding to name by 12 months.
 - Not pointing to objects to show interest by 14 months.
 - Not engaging in simple pretend play by 18 months.
 - Avoids eye contact.
 - Wants to be alone.
 - Speech and language delay.
 - Obsessive interests.
 - Gets upset over minor changes.
 - Unusual sensory reactions.

Making the Diagnosis

- History
- Observation
- Assessment
 - ADOS (autism specific assessment)
 - Mullen Scales, Bayley Scales (general developmental assessment)
 - Language Measurements (MacArthur Dev Comm Scales, Communication & Symbolic Behaviors Scale)
- Adaptive Skills (Vineland)
- Sensory Information
 - Observation and history.

What's Next?

- Hearing Evaluation
- Laboratory Evaluation
- ¿ EEG ?
- ¿ MRI ?
- Specific additional evaluation will depend on coexisting problems.
 - Gastrointestinal complaints
 - Allergy issues
 - Sleep issues
 - Problems with low muscle tone or fatigue

While Parents Wait for Services to Kick In...

- Parent Education

- www.hanen.org

- [*An Early Start for Your Child with Autism*](#)

- S. Rogers, G. Dawson, L. Vismara

- [*Teaching Your Child with Love and Skill*](#)

- Joyce Show

- [*Autism Speaks 100 Day Kit*](#)

- www.cdc.gov/ncbddd/actearly/freematerials.html

Parents need emotional support

- Parents need explicit direction to take care of themselves as individuals and as a couple
- Parents need explicit direction to take care of their other children in the midst of their worry about their affected child
- Parents need to understand that this is a marathon not a sprint
- Parents need some guidance in terms of what resources are legitimate
- Parents can benefit from support groups:
 - Asperger Parent Support Group
 - Myweb.lmu.edu/jdevine/as/
 - Foothill Autism Alliance
 - www.foothillautism.org
 - The Help Group
 - www.Helpgroup.org

So what do you do with these little guys?

- Most early intervention programs are for the three-year-old plus populations.
- Huge developmental differences between 1 – 2 year old and 3 – 4 year old

If the Parents have Resources...

- Speech and Language Therapy
- Occupational Therapy Assessment
 - Match therapist to child and family

Piaget and Cognitive Development

- Sensorimotor Stage: Birth to Age 2
 - Knowledge of the world gained from sensory exploration and motor activities
 - “TESTING OF CIRCULAR REACTIONS”
 - “EARLY REPRESENTATIONAL THOUGHT”



PIAGET AND COGNITIVE DEVELOPMENT

- Preoperational Stage: two to seven years of age
 - Language development
 - Manipulation of symbols



- Need to identify underlying deficits and strengths to set the stage for intervention

- Sensory integration

- Emotional self-regulation

Start by Teaching Observational Skills

Put on that scientist hat and

Pick several times during the day when you can watch your child

bath time

meal time

play time

getting to sleep

changing diaper

Record your observations in the following areas:

*Is my child under/over sensitive to sounds...touch...visual input
...deep pressure...rotational movement

*Does my child seem to seek out a particular kind of sensory input

*Does my child avoid certain kinds of sensory input

When is my child at his/her happiest and most comfortable, physically and emotionally?

When is he/she the most uncomfortable, physically and emotionally?

When is my child the most willing and able to play with me, engage with me? What is happening at that time? Where are you both?

What is the setting like? What is the time of day?

What are you doing? What is he or she doing?

What captures your child's attention (in a happy way)?

LET THE GAMES BEGIN!!

Once parents have learned to look at see how to “optimize” their child so that he or she is ready to engage...

An Early Start for Your Child with Autism

Sally Rogers, Geraldine Dawson, Laurie Vismara

Teaching Your Child with Love and Skill

Joyce Show

More Than Words

www.hanen.org

The Million Dollar Questions

- What therapeutic approach should be used?
- How much therapy is appropriate?



Emerging evidence of difference developmental trajectories in children with autism

- Aim for at least 25 hours per week of intervention
- Intervention should be evidence based
- Intervention should be tailored to the needs of the child

Conclusions

- Autism CAN be reliably diagnosed in the second year of life.
- Autism SHOULD be diagnosed in the second year of life.
- Early intervention means better outcome.