



**ERNIE ELS**  
ELS FOR AUTISM

# Understanding the Nature of Autism Spectrum Disorder

# What is Autism Spectrum Disorder?

- \* Complex developmental brain disorder
  - \* Emerges (and is often diagnosed) during early childhood
  - \* Significantly impacts social skills, communication & behavior across the lifetime
  - \* Considered to be a spectrum

# What is autism?

Autism is a  disorder.

Correct - Click anywhere or press  
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Incorrect - Click anywhere or press  
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You must answer the question  
before continuing

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# Autism Spectrum Disorder (ASD)

## DSM-IV: Pervasive Developmental Disorders



## DSM-5: Autism Spectrum Disorder

- \* Changed name of category
- \* No separate diagnoses within the spectrum (all individuals get diagnosis of ASD)
- \* Individuals with previous DSM-IV diagnoses should automatically be given the diagnosis of ASD

# How Common is ASD?

- \* 1 in 68 children identified with ASD (CDC, 2014)
  - \* 30% increase since 2008 (1 in 88)
- \* Boys are almost five times more likely to have ASD
- \* All racial, ethnic, and social classes are affected
  - \* White children more likely to be identified
- \* Most not diagnosed until after age 4

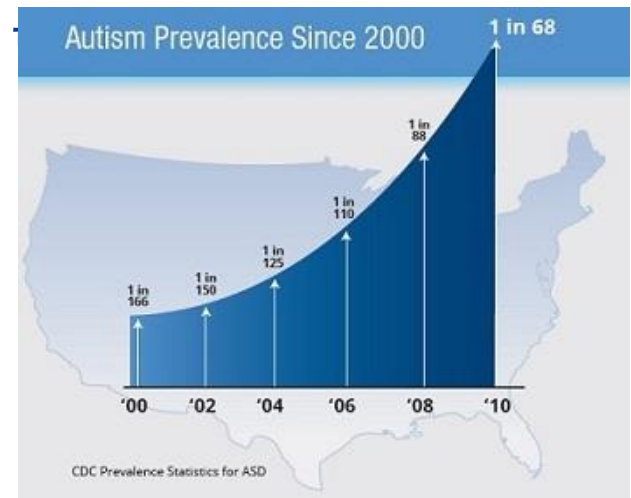


Photo courtesy of Autism Speaks

(CDC, 2014)

# What Causes ASD?

- \* Exact cause/causes unknown
  - \* Likely many causes for multiple types of ASD
  - \* May be many different factors, including genetic, biologic, and environmental
- \* Risk Factors
  - \* Genes (Huquet & Bourgeron, 2013)
  - \* Children who have a sibling with ASD are at higher risk (Ozonoff et al., 2011)
  - \* Children born to older parents (Durkin et al., 2008)
  - \* Prematurity or low birth weight (Schieve et al., 2014)
  - \* Chromosomal disorder/genetic syndromes (e.g., Fragile X, Rett's syndrome)



# Associated Characteristics

- \* Approximately 20-25% develop seizures (Canitano, 2007)
- \* Often occurs along with other disabilities
- \* 10% have co-occurring psychiatric diagnosis (e.g., depression, anxiety)
- \* A wide range of IQ scores are reported
  - \* Almost half (46%) have average or above average IQ
  - \* Uneven development in skills/abilities
- \* Often present with learning challenges
  - \* Distractibility, organizational difficulties, generalization/maintenance difficulties, unique motivational systems, behavior problems

# Risk Factors

The  of the mother or father is one example of a risk factor associated with ASD.

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# How is ASD Diagnosed & Treated?

- \* No blood or medical test to detect ASD
  - \* Diagnosis is based on observed behavior and development
  - \* Can sometimes be detected by 18 months
  - \* Can be reliably diagnosed by age 2 years (Lord et al., 2006)
- \* No known “cure”
  - \* Early intervention and evidence-based treatment (e.g., ABA) can significantly improve development (Wong et al., 2013)
  - \* The earlier the intervention, the better!



# ASD can be reliably diagnosed by the age of 2.

- A) True
- B) False

Correct - Click anywhere or press  
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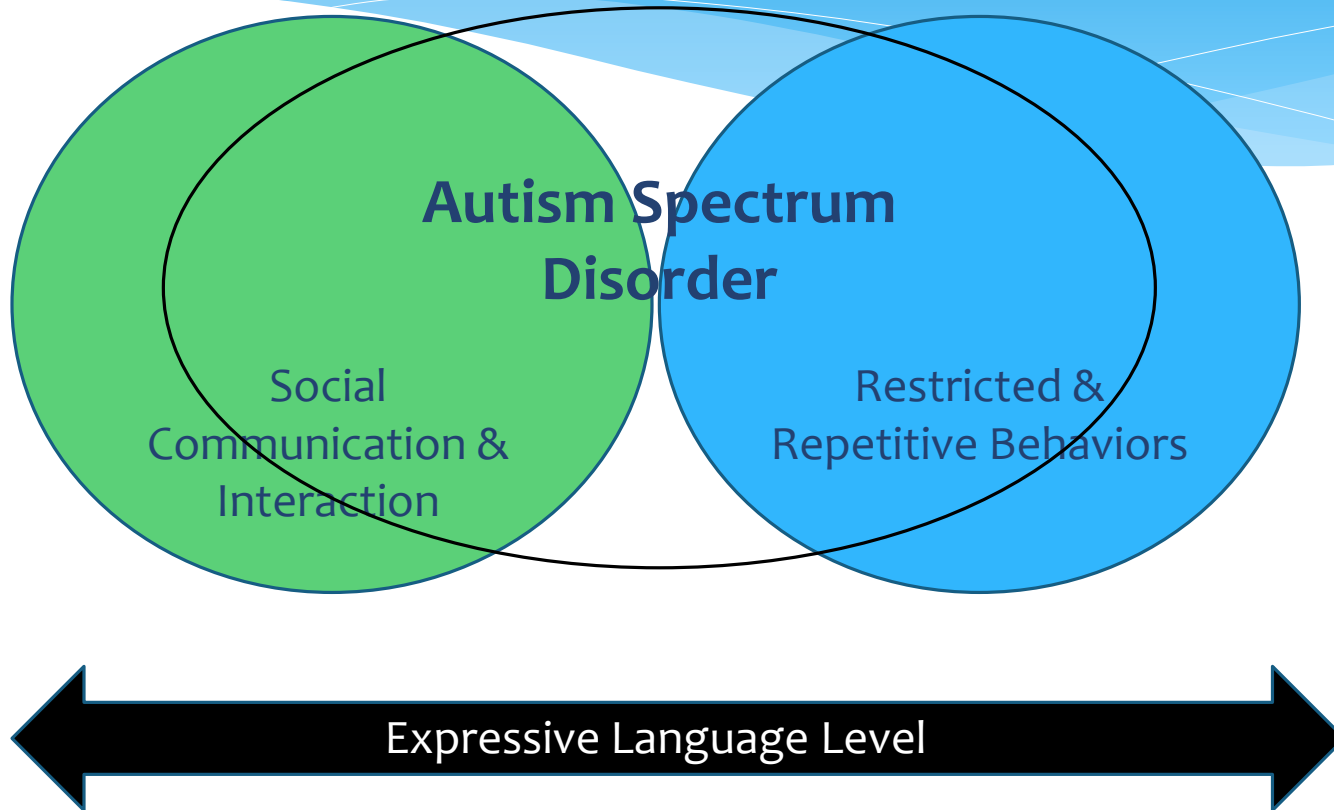
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# What Main Areas are Affected?



# Social Interaction & Communication Challenges

- \* Little sharing of pleasure, interests, and achievements with others
- \* Difficulty with back-and-forth conversations
- \* Limited or lack of eye contact
- \* Understanding nonverbal information like facial expressions
- \* Often delayed in developing gestures, and also use gestures in unusual ways (“hand as a tool”)
- \* Difficulty using and combining nonverbal behaviors (e.g., eye contact) to communicate
- \* May repeat what other say (echolalia)



# Some examples of social challenges include

- A) unable to engage in pretend play
- B) difficulty making friends
- C) prefers solitary play
- D) all of the above
- E) none of the above

Correct - Click anywhere or press  
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# Peer Relationships & Play Challenges

- \* May not imitate simple household routines
- \* May not engage in more complex pretend play (e.g., playing “house”)
- \* May have trouble sharing, taking turns or working collaboratively
- \* May seem oblivious to others and/or uninterested in other children
- \* May seem to prefer solitary activities
- \* May have trouble making friends



# Behavioral Challenges

- \* Repetitive or unusual use of language (e.g., echolalia, stereotyped speech)
- \* Unusual motor mannerisms
- \* Strong reactions to small changes in the environment or to routines
- \* Problems being “flexible” and become anxious or angry if rules or schedules are not followed
- \* May use objects repetitively or in unusual ways
- \* May have highly restricted/fixated interests
- \* May have MELTDOWNS and/or display self-injury
- \* May repeat things incessantly : perseveration (especially things related to areas of )



Select examples of situations that may cause a meltdown in someone with autism. Select all that apply

- A) changes in routine
- B) sensory overload
- C) lining up cars
- D) transitions
- E) eating a favorite food item

Correct - Click anywhere or press  
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# Sensory Processing

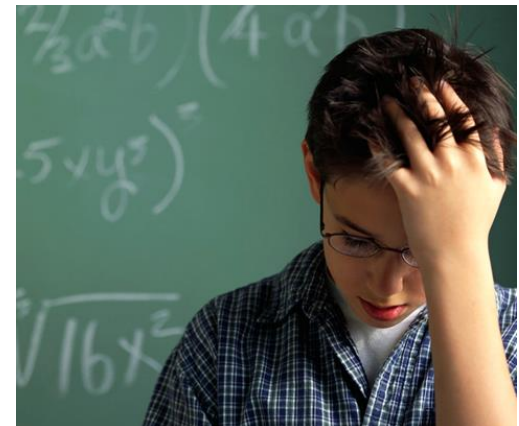
- \* Unusual reactions to the way things sound, smell, taste, look or feel
- \* May be under- or over-sensitive to sensory input
  - \* Hyposensitive-----hypersensitive
  - \* Excessive smelling, biting/mouthing/licking, or touching of objects
  - \* Visual fascination (peering) with lights or movement of objects
  - \* Picky eating





# Expressive Language

- Language abilities vary widely
- May be nonverbal or minimally verbal
- Others may have well-developed language but difficulties with social use of language known as “pragmatics”
  - \* Overly formal (“pedantic”)
  - \* Literal interpretation (e.g., “Go fly a kite!”)
  - \* Difficulty with conversations



# Complete the sentence below by filling in the blanks.

Repeating what other say is known as

Correct - Click anywhere or press  
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# Idioms may be hard for people with autism to understand because

- A) they don't hear them often
- B) they interpret language literally
- C) they don't know how to spell the word idiom
- D) they don't have a sense of humor

Correct - Click anywhere or press  
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# Guiding Principles for Choosing Treatments

- Rely on evidence-based practices with documented efficacy as *core* treatments
- Choose interventions whose benefits clearly outweigh risks
- Therapeutic treatment options should have two primary objectives:
  - To assist individuals to **acquire functional skills** and realize their **optimal potential**
  - To **reduce the array of maladaptive behaviors** that are likely to interfere with functioning and restrict access to the community

# Complete the sentence below by filling in the blanks.

The primary goals of effective therapeutic treatment options should be to reduce maladaptive behaviors and teach

Correct - Click anywhere or press Control Y to continue

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You must answer the question before continuing

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# Treat the person, not the disorder

- All affected individuals are unique people with distinct behavioral and learning profiles
- Effective treatments are typically those that are:
  - early and intensive
  - multidisciplinary & well-coordinated
  - multidimensional – targeting the “pervasive” nature of the disorder
  - individualized to the person and the context in which they live their lives (family, school, community)



# Critical programmatic elements: National Research Council Recommendations

- *Early* intervention with *intensive* engagement
- Use of a developmentally-organized curriculum with broad scope and sequence
- Supportive teaching environment
  - Acquisition, generalization and maintenance tasks
  - Predictability and routines
  - Appropriate accommodations and supports
  - Trained staff
- Functional approach to problem behavior
- Transition planning and case coordination
- Family involvement

# Common Autism Interventions

- Principles & Practices of Applied Behavior Analysis
  - Discrete Trial Teaching (DTT)
  - Analysis of Verbal Behavior (VB)
  - Pivotal Response Training (PRT)
- Principles & Practices of Structured Teaching
  - TEACCH-structured teaching
  - Visual Systems & Supports
- Developmentally-Based Interventions
  - Floor Time (DIR)
  - Relationship Development Intervention (RDI)
  - The SCERTS™ Model
- Ancillary Rehabilitation Therapies
  - Speech and Language Therapy
  - Occupational & Physical Therapies

# Select the common autism interventions

- A) discrete trials
- B) SCERTS
- C) music therapy
- D) TEACCH
- E) hyperbaric chamber

Correct - Click anywhere or press  
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# Focused Intervention Practices

## National Professional Development Center on ASD (NPDC)

- \* **Antecedent-Based Intervention (ABI)**
- \* **Computer-Aided Instruction (CAI)**
- \* **Differential Reinforcement**
- \* **Discrete Trial Training**
- \* **Extinction**
- \* **Functional Communication Training (FCT)**
- \* **Naturalistic Intervention**
- \* **Parent Implemented Intervention**
- \* **Peer-Mediated Instruction and Intervention (PMII)**
- \* **Picture Exchange Communication System (PECS)**
- \* **Pivotal Response Training (PRT)**
- \* **Prompting**
- \* **Reinforcement**
- \* **Response Interruption/Redirection**
- \* **Self-Management**
- \* **Social Narratives**
- \* **Social Skills Groups**
- \* **Speech Generating Devices (SGD)\***
- \* **Structured Work Systems\***
- \* **Task Analysis**
- \* **Time Delay**
- \* **Visual Supports**

Added by National Standards Project Literature Review:  
Cognitive Behavioral Intervention (CBI), Exercise,  
Video Modeling, Modeling, Scripting, Structured Play Groups

Video modeling and social narratives are examples of focused intervention practices with supporting research

- A) True
- B) False

Correct - Click anywhere or press  
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# Other Interventions

Emerging with some evidence

- ◆ Sensory integration/diet
- ◆ Music therapy\*
- ◆ Touch therapy
- ◆ Joint attention-symbolic play instruction\*
- ◆ Reciprocal Imitation training\*

Insufficient evidence

- ◆ Hormone therapies
- ◆ Immunological therapies
- ◆ Dolphin therapy
- ◆ Vitamin therapies
- ◆ Diet therapies
- ◆ Chelation therapy
- ◆ Hyperbaric chamber

# How About Not 'Curing' Us, Some Autistics Are Pleading: December 20, 2004

**The New York Times**  
ON THE WEB

- \* **Autism is a spectrum disorder – heterogeneous in every way:**
  - \* Symptom Presentation
  - \* Causal Pathways
  - \* Therapeutic Strategies
  - \* Treatment Outcomes

***Furthermore, while some seek “cure”, “recovery” or remediation of skill deficits, others simply seek respect and acceptance of their uniqueness.***

# ASD stands for what?

Correct - Click anywhere or press  
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Incorrect - Click anywhere or press  
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# References

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