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 Control Y to continue

Incorrect - Click anywhere or press Control Y to continue

You must answer the question before continuing

Submit  Clear
Autism Spectrum Disorder (ASD)

DSM-IV: Pervasive Developmental Disorders
- Childhood Disintegrative Disorder (Heller’s Syndrome)
- Autistic Disorder
- Pervasive Developmental Disorder – Not Otherwise Specified
- Asperger Disorder

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

(APA, 2013)
1 in 68 children identified with ASD (CDC, 2014)
- 30% increase since 2008 (1 in 88)
- Boys are almost five times more likely than girls 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

(CDC, 2014)
one example of a risk factor associated with ASD.

Correct - Click anywhere or press Control Y to continue
Incorrect - Click anywhere or press Control Y to continue

Submit  Clear
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

You must answer the question before continuing.
What Main Areas are Affected?

Autism Spectrum Disorder

Social Communication & Interaction

Restricted & Repetitive Behaviors

Expressive Language Level
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

You must answer the question before continuing.
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
- D) transitions
- E) eating a favorite food item

You must answer the question before continuing
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
Repeating what other say is known as [ ]
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 Control Y to continue
Incorrect - Click anywhere or press Control Y to continue

You must answer the question before continuing.
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
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
- D) TEACCH

E) hyperbaric chamber

Correct - Click anywhere or press Control Y to continue

You must answer the question before continuing

Incorrect - Click anywhere or press Control Y to continue
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.
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

National Standards Project 2014
How About Not 'Curing' Us, Some Autistics Are Pleading: December 20, 2004

* 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?

You must answer the question before continuing.

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Submit  Clear
References


