
Will I Gain Weight on a Sensory Diet?

A review of ASD Treatment and Program Suggestions

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Autism Spectrum Disorders or Pervasive Developmental Disorders

Federal Definition:

Autism is a developmental disability, generally evident before age three, that adversely affects a student's educational performance and significantly affects developmental rates and sequences, verbal and non-verbal communication and social interaction and participation. Other characteristics often associated with autism are unusual responses to sensory experiences, engagement in repetitive activities and stereotypical movements and resistance to environmental change or change in daily routines. Students with autism vary widely in their abilities and behavior. The term does not apply if a student's educational performance is adversely affected primarily because the student has an emotional and behavioral disorder. [34 CFR 300.7©(1)(i)]

Pervasive Developmental Disorders Umbrella Term

- **Autistic Disorder**
- **Pervasive Developmental Disorder – Not Otherwise Specified (PDD-NOS) includes atypical autism**
- **Asperger's Syndrome**
- **Rett Syndrome**
- **Childhood Disintegrative Disorder**



Common Autism Spectrum Disorders (ASDs) Umbrella Term

- **Autistic Disorder**
- **Pervasive Developmental Disorder (PDD-NOS)**
- **Asperger's Syndrome**



(differ in terms of onset, severity, nature of symptoms)

ASDs

Extremely complex neurological disorder and developmental disability which causes substantial impairment in social interaction, communication and behaviors

Diagnosis

- based on observable behaviors and pattern of development
- Meet DSM-IV Criteria
- Rule out other disorders
- No known cause nor cure



3 Areas Affected:

- **Reciprocal Social Interactions**
- **Communication**
- **Behavior and Interest**



**Development in these areas follows a
DIFFERENT path than that of most children.
Differences are QUALITATIVE, not only the
result of delays**

PPD / ASDs

- **Not visible at birth**
- **Uneven cognitive development**
- **Wide range of impairment**
- **All SES and educational levels**
- **Four times more boys than girls**
- **No culture or race distinction**
- **Characteristics can improve / lifelong**
- **Affects many areas of functioning**
(social, communication and cognitive domains)



Range of Functioning



Measured Intelligence

Severe ----- Gifted

Social Interaction

Aloof-----passive-----Active but odd

Communication

Nonverbal ----- Verbal

Behaviors

Intense-----Mild

Sensory

Hyposensitive ----- Hypersensitive

Motor

Uncoordinated-----Coordinated

Myths

- **Is not affectionate**
- **Does not form attachments**
- **Never makes eye contact**
- **Does not communicate**
- **Engages in self-stimulatory and repetitive behavior all the time**
- **Lack emotional experience**
- **Is intellectually disabled**



Challenges of ASDs

- Language
- Nonverbal communication
- Social interests and interaction
- Unusual interests
- Difficult behaviors and routines
- Engagement
- Comprehension
- Safety



Challenges

- **Attention and activity issues**
- **Unusual or uneven skill development**
- **Sensory issues (tactile defensive, etc)**
- **Sleep and eating issues**
- **Aggression or self-injurious behavior**
- **Abnormality in mood and affect**



Communication Profile, Implications, and Treatment

www.asha.org

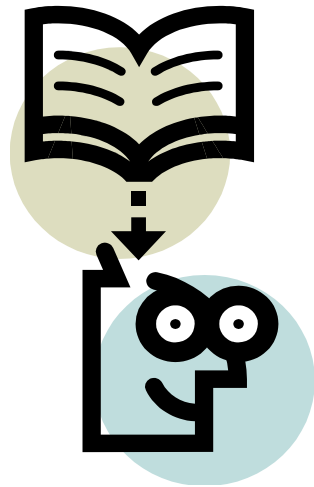
- **Communication can vary greatly from non-verbal with no communicative interest to advanced verbal skills with obsessive type tendencies**
- **Following screening, diagnosis, and eligibility considerations, ongoing assessment is critical to guide program planning**
- **Dynamic assessment is a term used for assessment protocols in which support is systematically provided to determine what factors influence and enhance an individual's current skills**

Communication Intervention

- **There is empirical support demonstrating the effectiveness of a range of approaches for enhancing communication skills of individuals with ASD along a continuum from behavioral to developmental**
- **Intervention research is not yet available to predict which specific intervention approaches or strategies work best with which individual with ASD**

Educational Impact

- **Low motivation for undesired activities**
- **Unusual sensory reactions (tactile defensive)**
- **Unusual play and learning patterns to include restricted areas of interests**
- **Variable attention, activity level**
- **Difficulty maneuvering through school considering social, communication and behavior challenges.**
- **May become subject of teasing**



Study the Literature

Rapidly Changing Area of Research

Getting Informed



Georgia Department of Education
Kathy Cox, State Superintendent of Schools

National Academy of Sciences Report: Educating Children with Autism

www.nap.edu

- **Report from 2001 summarizing intervention research for children with autism**

Features of Effective Interventions:

- ❖ Begin as early as possible
- ❖ Intensive intervention (year-round, 25+hours)
- ❖ Individualized goals with repeated practice
- ❖ Family involvement and training
- ❖ Low student: teacher ratios
- ❖ Built-in ways to measure progress with adjustments made to intervention program

National Academy of Sciences Report: Educating Children with Autism

www.nap.edu

- ❖ Functional Communication
- ❖ Social Tolerance and Interaction
- ❖ Appropriate Engagement
- ❖ Independent Self-help Skills
- ❖ Organizational Skills
- ❖ Leisure Skills
- ❖ Team=child, family, teachers, other school personnel, therapists, community...
- ❖ Everyday environments

Programmatic Needs

Proactive Approach

- Proactive positive behavior intervention plan
- Highly structured and organized environment (**visual schedule**)
- Predictable, consistent routine
- Transition support
- Team approach for support and related services to include therapies
- Emotional support
- Explicit social and self-help skills training
- Curriculum relative to cognitive abilities

Assistive Technology

Definition of Assistive Technology

- Any item, piece of equipment or product system, whether acquired commercially off the shelf, modified, or customized, that is used to increase, maintain, or improve the functional capabilities of children with disabilities.

Individuals with Disabilities Education Improvement Act of 2004

Assistive Technology

Assistive Technology Service

Assistive technology service is any service that directly assists an individual with a disability in the selection, acquisition, or use of an assistive technology device.

Individuals with Disabilities Education Improvement Act of 2004

Assistive Technology

- **Assistive Technology consists of various items in a continuum from “low” tech to “high” tech.**
- **Various types of technology can be provided and used for the same student based upon individual need within a variety of activities and environments.**

Assistive Technology

“Low” tech - Any strategies/interventions that are not battery powered or electronically operated.

“Low” tech strategies are usually low in cost and easy to use.

- Picture Exchange Communication Systems
- Dry Erase Boards
- Clip Boards or 3 ring binders
- Laminated Photographs/ Visual Supports
- Photo Albums
- Manipulatives/Objects



Assistive Technology



“Mid” tech - Strategies that require the use of batteries or basic electronic devices that are used primarily as a means to support expressive communication.

- **Voice Output Communication Aids** —equipment that records voice and can be activated by touch. The voice is often paired with a picture clue.
- **Language Master** — cards with recordable strips are run through the machine to produce sounds. You have the option of adding pictures to the cards.
- **Tape Recorders, Timers, Calculators**

Assistive Technology

“High” tech - Strategies that are usually the most expensive and complex to use.

Video cameras

Computers

Adaptive hardware for computers

Specialized computer software

Sophisticated voice output devices



Assistive Technology

WHY?

- Most students with autism process visual information easier than auditory information.
- The use of assistive technology devices and strategies presents information visually.
- Assistive technology allows students to engage and interact.
- Assistive technology can increase student independence.

Assistive Technology

Important Tips to Remember

- Always try less intrusive low technology strategies first
- Be sure that the technology matches the needs and abilities of the individual child
- Analyze the environment to see which type of device will most support the child's participation

**THE DEVICE MUST MATCH THE CHILD'S ABILITIES
AND DEMANDS OF THE ENVIRONMENT**

Commonly Used Interventions

- ABA
- Floortime
- Lovaas
- Occupational Therapy
- Speech Therapy
- PECS
- TEACCH
- Verbal Behavior Intervention
- Relationship Dev. Int.
- Sensory Integration Therapy/ Sensory Diet
- Gluten / Casein Free
- Hippotherapy
- Listening Therapy
- SCERTS
- Hyperbaric Chamber
- Chelation (Detox)
- Secretin Treatment

Interventions and Therapies

www.autismspeaks.org

- **Applied Behavior Analysis (ABA) – (Skinner)**
Process of systematically applying interventions based upon the principles of learning theory to improve socially significant behaviors to a meaningful degree.
- **Methods use principle of positive reinforcement to strengthen a behavior by arranging it to be followed by something of value**

Types of ABA

Discrete Trial – (DTT) A single cycle of a behaviorally-based instruction routine. A trial may be repeated several times in succession, per day, week, over several days, until the skill is mastered. Individually administered (typical of Lovaas)

Early intensive behavioral intervention (EIBI)

ABA and positive behavior support (PBS) DTT, language instruction, incidental teaching, peer modeling, video modeling, social stories, Picture Exchange Communication System (PECs) and sign language, natural environment shadowing and semi-structured play dates

Types of ABA

- **Incidental teaching**- provides structured learning opportunities in the natural environment by using the child's interest and natural motivation.
- **Pivotal response training (PRT)** – variant of discrete trial with emphasis on giving the child power to make choices.
- **Verbal Behavior Approach** focuses on teaching specific components of expressive language first.

Behavioral and Educational Interventions

- **Developmental, individual differences, relationship-based approach (DIR or Floortime) - Stanley Greenspan**
- **Based on the premise that child can increase and build a larger circle of interaction with an adult who meets the child at his current developmental level and who builds on the child's particular strengths.**

Behavioral and Educational Interventions

- **Relationship development intervention (RDI)**

Steve Gutstein

**Parent based treatment which focuses on emotional development – problem gaining friends, feeling empathy, expressing love and being able to share experiences with others.
*(how do you move forward?)***

Behavioral and Educational Interventions

TEACCH at UNC

- Treatment and education of autistic and communication-related handicapped children (TEACCH)
 - *Eric Schopler, R.J. Reichler and Ms. Margaret Lansing*
 - **Special education program**
 - **Tailored to the autistic child's individual needs**
 - **Focus is on design of the physical, social and communicating environment**
 - **The environment is structured to accommodate the difficulties a child with autism has while training them to perform in acceptable and appropriate ways**

Complementary and Alternative Medicine

CAM is a group of different medical and health care systems, practices, and products that are not part of conventional medicine

National Center for Complimentary and Alternative Medicine

<http://nccam.nih.gov/health/whatiscam/#1>. Accessed 2006

- **Alternative medical systems** (homeopathy or Chinese medicine)
- **Mind-body interventions** (meditation, dance therapy, auditory integration)
- **Biologically based therapies** (using herbs, foods, vitamins)
- **Manipulative and body-based** (deep pressure, brushing)
- **Energy therapies** (electromagnetic fields, etc.)

Research on Treatment

CDC References

www.clinicaltrials.gov

Lists federally funded studies that are looking for participants. Go to this website per “autism”

www.autismspeaks.org

The Autism Treatment Network (ATN) seeks to create standards of medical treatment that will be made broadly available to physicians, researchers, parents, policy makers, and others who want to improve the care of individuals with autism.

Research for Treatment and National Standards



www.nationalautismcenter.org

National Autism Center – Finalizing a Standards Project

Impressive group of clinicians, practioners, behaviorists collaborating to finalize National Autism Standards.

Go to the website and you can

request a copy as soon as released



Resources

US Department of Education www.ed.gov

Georgia Department of Education www.ga.doe.gov

Centers for Disease Control www.cdc.gov

American Speech and Hearing Association www.asha.org

Asperger's Organization www.asperger.org

Asperger Education Network (ASPEN) www.aspennj.org

Autism Society of America www.asa.org note: online Autism 101 course

Autism Speaks www.autismspeaks.org note: video series

Organization for Autism Research www.researchautism.org

Babies Can't Wait www.health.state.ga.us/programs/bcw

Resources

National Research Council (2001). Educating Children with Autism. Washington, DC: National Academy Press.

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