

# **Autism Spectrum Disorders**



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# What are Autism Spectrum Disorders (ASD)?

~Range of complex neurodevelopmental disorders characterized by social impairments, communication difficulties, and restricted, repetitive, and stereotyped patterns of behavior ~

## Categories of Autism Spectrum Disorders

- \*Autistic Disorder (Autism, Classic Autism)
- \*Asperger Disorder (Syndrome)
- \*Rett's Disorder (Syndrome)
- \*Childhood Disintegrative Disorder (CDD)
- \*Pervasive Developmental Disorder, not otherwise specified (PDD, NOS)

# Impaired Social Interaction

(All children diagnosed with an ASD have varying degrees of these symptoms):

- \*May fail to respond to their name

- \*Avoid eye contact

- \*Have difficulty interpreting what others are thinking or feeling due to not understanding social cues (i.e. tone of voice)

- \*Lack empathy

## **Early symptoms:**

- no babbling or pointing by age 1
- no single words by 16 months or two-word phrases by age 2
  - no response to their name
  - loss of language or social skills
    - poor eye contact
  - excessive lining up of toys or objects
  - no smiling or social responsiveness
- do not seek to share enjoyment of toys or activities by pointing or showing to others
- respond unusually when others show anger, distress, or affection
  - echolalia (repeating words or phrases they hear)

## **Later Indicators:**

- impaired ability to make friends
- impaired ability to initiate or sustain a conversation
- absence or impairment of imaginative or social play
- stereotyped, repetitive, or unusual use of language  
(sing-song or robot-like and flat)
- restricted patterns of interest that are abnormal in intensity or focus
  - preoccupation with certain objects or subjects
- inflexible adherence to specific routines or rituals
  - body language doesn't match the words being spoken
- difficulty understanding people's point of view

**-Two children with same diagnosis may look very different when it comes to behaviors and abilities**

**-No matter what treating professionals call the ASD, the child's unique needs are what is truly important**

- There may be intellectual disability
- Some children experience difficulty in motor coordination and attention
- Some problems with physical health are experienced like sleep problems and gastrointestinal disturbances
- Some children do repetitive movements like rocking, twirling, biting, or head-banging
- Some children refer to themselves by their own name

# Causes of Autism Spectrum Disorders

- Genetics
- Certain genes linked
- Irregularities in several regions of the brain
- Abnormal levels of serotonin or other neurotransmitters
- Environment
- Anything outside of the body that can affect health (air, water, food, medicines)
- Includes surroundings in the womb
- Looking at gene/environment connection

\*Twin and family studies strongly suggest that some people have a genetic predisposition to  
ASDs

\*Identical twin studies show that if one twin is affected, there is up to a 90% chance the other twin will be

\*There is a 5% chance that if you have one child with an ASD, you may have another child with an ASD (greater % than the general population)

\*Research is also geared to looking at the role of the immune system in ASDs

# Prevalence of Autism Spectrum Disorders

- All ethnic groups, all socioeconomic groups, all age groups
  - 1 out of 88 children diagnosed with an ASD
- Males are 4-5 times more likely to have an ASD than females
  - Many people with ASDs still need services and supports as they get older, but many are able to work successfully and live independently or within a supportive environment
- About 40% of people with an ASD have average to above average intellectual abilities
- About 25% of people with an ASD are nonverbal but can learn to communicate using other means

# How is diagnosis made?

- Usually between ages of 2 and 3
- Research geared toward methods of earlier diagnosis
- Initial diagnosis generally comes from pediatrician through developmental screening at well-child check-ups
- If symptoms indicate, screening instrument completed
- Comprehensive evaluation then completed
- Multidisciplinary team
- Thorough neurological assessment
- In-depth cognitive and language testing
- Hearing is checked
- Brain imaging
- Gene tests
- Memory, problem-solving tests
- Blood work

# Co-occurring conditions

Fragile X

tuberous sclerosis

seizures

Tourette's syndrome

learning disabilities

Attention Deficit Hyperactivity Disorder

Anxiety

Depression

Behavioral problems

Sensory problems

Sleep problems

Gastrointestinal problems



# TREATMENT STRATEGIES

Although there is no cure for Autism Spectrum Disorders, many children's symptoms improve with treatment and age.

Therapies and behavioral interventions are designed to remedy specific symptoms and can bring substantial improvement.

The earlier the intervention, the better.

-Every child is different so working with the team of providers with parent/guardian as the lead will help to figure out which treatment strategies will work best.

-There are conflicting messages

-No single treatment will be effective for all people on the spectrum.

# Educational and Behavioral Interventions

-Applied Behavioral Analysis (ABA)

-Developmental, Individual Difference, Relationship-based (DIR)/Floortime

-Treatment and Education of Autistic and related Communication handicapped children (TEACCH)

-Interpersonal Synchrony

-Discrete Trial Teaching (DTT)/Lovaas Model

-Picture Exchange Communication Systems (PECS)

-Pivotal Response Treatment (PRT)

-Relationship Development Intervention (RDI)

-Social Communication/Emotional Regulation, Transactional Support (SCERTS)

Verbal Behavior (VB)

# Challenging Behaviors

- Determine the quality of life of the person with the ASD
  - Look at the function of the behavior
  - Don't try to just extinguish behaviors; could be replaced with another maladaptive behavior
- Frustration and inability to communicate can lead to aggressive or self-injurious behavior
  - R/O everything when looking at function of the behavior
- Don't wait until child is older to work on the behavior; the behavior and the child will only get bigger
- During treatment, behavior likely will get worse before better
  - Consistency is important

# Other Therapies

- Music Therapy
- Art Therapy
- Animal Therapy
- Speech Therapy
- Sensory integration
- Physical therapy
- Occupational Therapy
- Social Interventions/Social Groups
- Individual and Family Psychotherapy

## Biomedical treatments

- Improving the diet
- Food Sensitivities/Allergies
- Gluten (wheat)-free diet
- Casein (dairy)-free diet
- Vitamin/mineral supplements
- High-dose vitamin B6 and magnesium
- Essential fatty acids (omega-3 and -6)
- Digestive enzymes
- Anti-fungals and probiotics
- Amino acids
- Melatonin
- Thyroid supplementation
- Glutathione therapy
- Chelation

## Medication

-Can help to reduce symptoms like Risperdal and Abilify to help reduce aggression

-Antidepressants like Prozac and Zoloft are used to help treat depression and anxiety symptoms

-Stimulants like Concerta can help with symptoms of hyperactivity

# Effects on the Family

A diagnosis of ASD in a family affects every member of the family and can lead to marriage stress, stress on siblings, work stress, financial stress, personal relationships, and dealing with responsibilities

# PERSONAL STORIES

## Shepherd, age 4

- Age of diagnosis, by whom, specific diagnosis
- Symptoms
- Causes discussed
- Therapies/Treatments/Education
- Feelings of parents

## Mason, age 7

- Age of diagnosis, by whom, specific diagnosis
- Symptoms
- Causes discussed
- Therapies/Treatments/Education
- Feelings of parents

**Examples**

# Resources

[www.ninds.nih.gov](http://www.ninds.nih.gov)

[www.cdc.gov/autism/](http://www.cdc.gov/autism/)

[www.autismspeaks.org](http://www.autismspeaks.org)

<http://kidshealth.org>

Interviews with Morgan Muir and Michelle Sluzarz

[www.autism-society.org](http://www.autism-society.org)

National Institute of Mental Health

[www.childrensnational.org/macche](http://www.childrensnational.org/macche)

[www.webmd.com](http://www.webmd.com)

DSM-IV-R

[www.helpguide.org](http://www.helpguide.org)