

Until All The Pieces Fit





AUTISMTOUGH

#SIBLINGS DAY



Objectives

At the end of this session, the participant will be able to:

1. explain the difference between scripting, parroting and stimming.
2. describe the characteristics of a patient that functions on the high-end vs. low-end of the spectrum.
3. explain some of the unique considerations when assessing a patient with autism.
4. design a management plan for an autistic patient presenting with a medical emergency.

What is Autism?

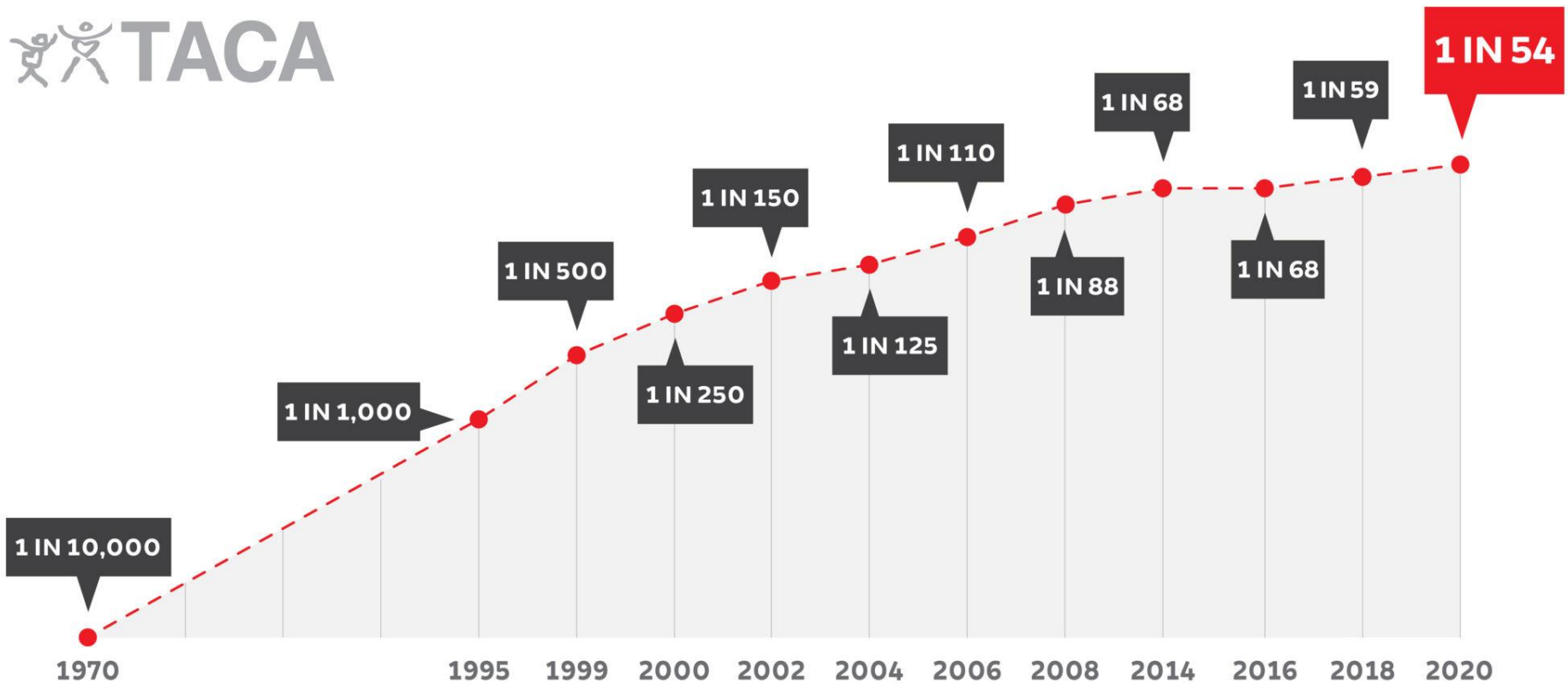
- Originates from the Greek word auto, meaning “self,” and describes a condition where persons are removed from social interaction, hence an isolated-self.¹
- Patients range from non-verbal with severe learning disabilities to those with above-average IQs.²
- Occurs within all racial, ethnic, and socioeconomic groups.
- Over 4 times more prevalent in boys.

1:54
children has
autism



we are families with autism helping families with autism

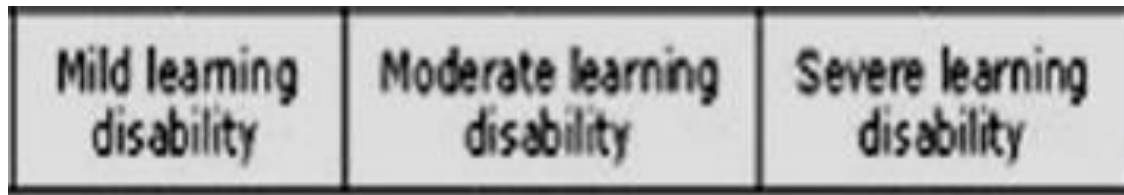
March 28, 2020 Stats



Underestimates

In spite of better awareness, a quarter of children with autism do not have a diagnosis by age 8.

AUTISM SPECTRUM

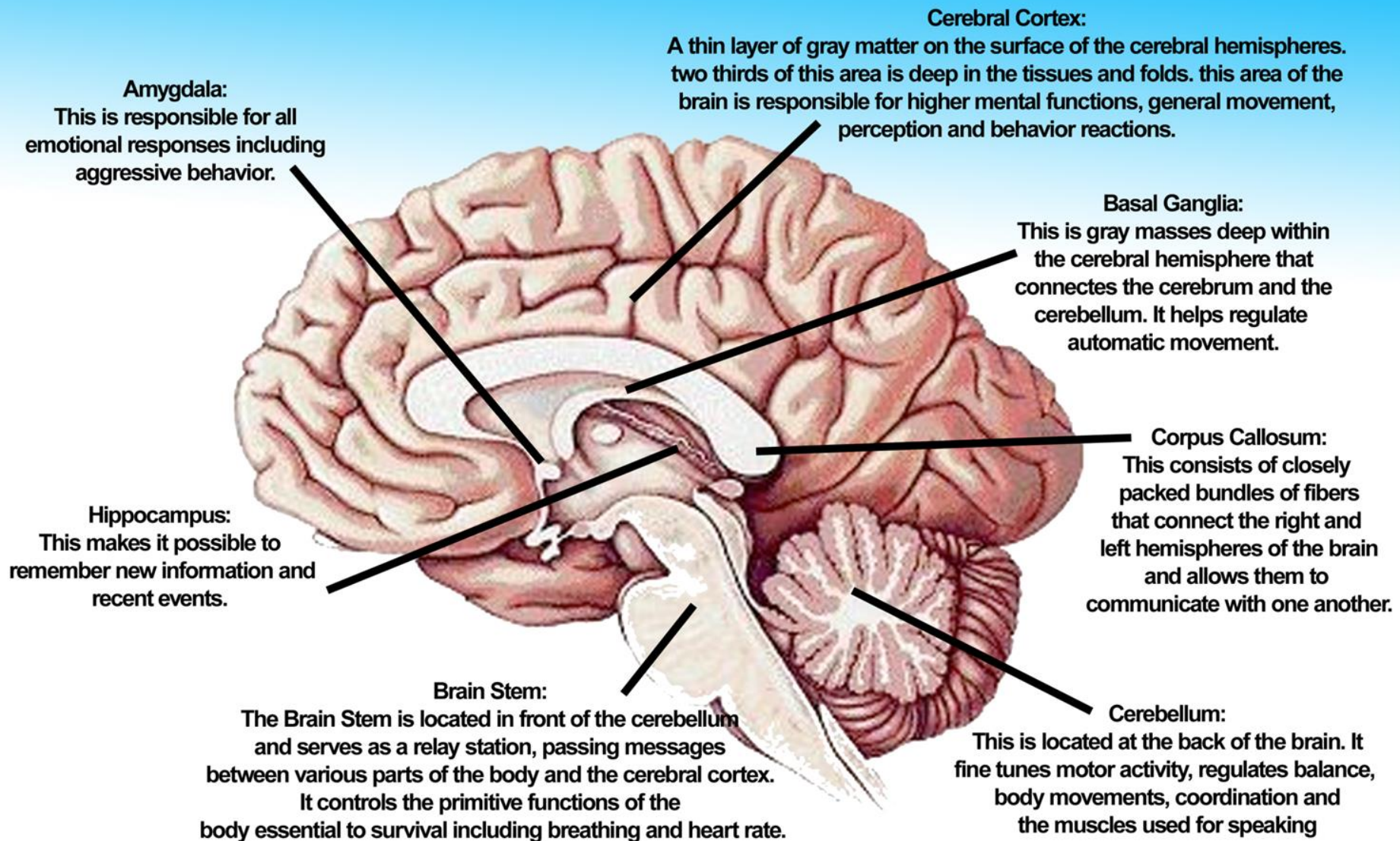


AUTISM is a spectrum disorder, meaning that these specific diagnoses will “blend” together.

The generic term “autism” is commonly used to describe any and all points on the spectrum.



Parts of the Brain Affected by Autism



What is Autism?

- There is not one specific cause identified with ASD
 - A genetic component has been demonstrated, but specific genes have yet to be identified.⁴
 - "Genetic susceptibility combined with environmental factors" – latest “most accurate description”
- There is no cure, but tx are available for many co-occurring conditions

IMMUNE MTHFR OXIDATIVE
SYSTEM ALLERGIES STRESS
EPIDEMIC AUTOIMMUNE
HPA AXIS CENTRAL NERVOUS SYSTEM ENVIRONMENTAL
EPIDEMIC BRAIN AUTISM MITOCHONDRIA
COMORBIDITIES
ENDOCRINE SEIZURES
SNPS GUT-BRAIN-AXIS
MULTI-GASTROINTESTINAL
FACTORIAL BIOMEDICAL

95%

OF CHILDREN WITH

AUTISM

— HAVE —

**CO-OCCURRING
CONDITIONS**

ON AVERAGE, EACH HAS

4.9

Common Co-Existing Conditions

- Mental retardation
- Epilepsy/seizure disorder
- Tic disorders (including Tourette's)
- ADHD
- Depression
- Sleep abnormalities
- Neurotransmitter disorders (glutamate and Ach)

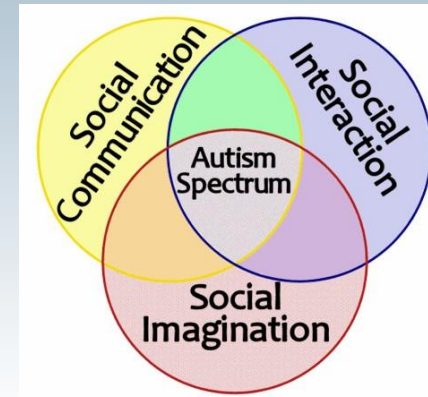
Common Co-Existing Conditions

- Obsessive/compulsive disorder
- Aggression/mood disorders
- Self-injurious behaviors
- Poor diet/selective eating = obesity
- Immune and GI problems

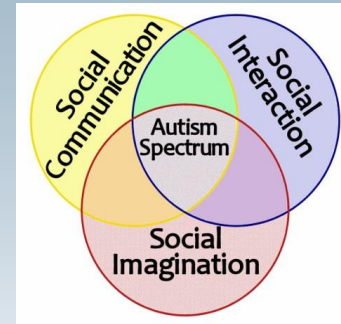


ASD General Behaviors

- Impaired Social Interaction
 - They avoid eye contact
 - Isolation / resisting inclusion in group activities
 - Avoids/resists physical contact
 - Will run away/hide from overstimulation
 - Have difficulty judging personal space



ASD General Behaviors



- Impaired Communication

- Delay/absence of speech – appear deaf
 - 30-50% of autistic patients are non-verbal
 - May only communicate with sign language, pictures
- Inability to perceive humor, sarcasm - literal
- Inability to interpret other's non-verbal communications (gesturing/facial expressions)
- Don't respond well to commands



ASD General Behaviors

- Restrictive, Repetitive, Stereotypical Behaviors, Interests and Activities
 - *Stereotyped motor mannerisms* (hand-flapping/rocking, eye blinking, repetitive noises, pacing, spinning)
 - Excessive preoccupation towards specific objects/interests













General Behaviors of ASD

- Ordering and arranging of items in a line or specific pattern



General Behaviors of ASD

• Wandering/Elopement/Bolting⁹

- Almost ½ of all ASD children wander
- It is a form of communication: an *I need*, *I want*, or *I don't want*
 - Usually to get something of interest
 - Or away from something bothersome
 - Sirens, dogs barking, fireworks
 - MVC's / fire
 - Holiday/family gatherings



- The patient doesn't consider himself or herself "lost"

General Behaviors of ASD

- **Affinity for Water / Traffic**
 - Drowning is a leading cause of death.
 - People with an ASD tend to have a strong affinity for water regardless of their ability to swim



General Behaviors of ASD

- **Climbing / Acts of Balancing / Jumping**
 - In & out of trees or windows or even on the outside of buildings
 - Appear to jump with no purpose, fear, or regard to how far they are jumping



General Behaviors of ASD

- **Rigid routines and schedules**
 - Food of certain color, layout of furniture/toys, wearing only clothes with certain fabrics
- Even minor interruptions in their routine may be a “big deal”
- Unexpected change can cause a high level of frustration, anger, and/or anxiety



General Behaviors of ASD

- May have a very flat affect
- Brutally honest and blunt
- Have unusual fears or obsessions
- Little concern about social norms and little understanding of appropriateness
- Great difficulty respecting others' opinions, interests or ideas
- Stubborn/prone to rage fits



General Behaviors of ASD

- **Scripting**

- Pt gets upset and the only way s/he can communicate is by quoting movies/shows that have scenes similar to how s/he feels



General Behaviors of ASD



- **Speech**
 - Inappropriate volumes
 - Monotone voice with unusual pronunciations
- May say “No” or “Yes” responding to all questions
- Echolalia (“parroting”)
 - Repeating something exactly as they hear it

Why Is EMS Called?

- Persons with autism are subject to the same basic health care needs as everyone.
- Injuries are more common in persons with ASD's than the general public
 - Especially - fractures, TBI, other head/face/neck injuries, injuries to the upper body, open wounds and burns⁶
- Self-injury behaviors
 - running full-speed into walls/head-banging
 - climbing, jumping from heights, etc.
 - excessive self-rubbing/scratching

Why Is EMS Called?

- **Lost person**

- Remember **WATT**
- **W**ater, parked **A**utos, busy **T**raffic, nearby **T**rain tracks

- **Suspected abuse/neglect**

- Parent/caregiver may be using “appropriate” methods to deal with escalation/meltdowns that may be perceived as abuse

- *A person acting “weird,” “impaired,” “drunk,” “high” or “psychotic.”*

Why Is EMS Called?

- **Escalation**

- The behavior of the person with ASD has exceeded the family member's or caregiver's ability to effectively intervene.



What is Escalation?

An involuntary increase in tantrum-like behaviors that include screaming, swearing, stomping, throwing objects, hitting and/or kicking (people or objects), pushing and biting, usually as a response to one or more stressors

- All emergencies are stressors of some sort
- During escalation, the pt. does not understand or comprehend the implications of his/her behavior
 - Realize they have lost control, but can't regain it on their own.

Causes of Escalation

- Common Stressors
 - New or unfamiliar/unexpected situations
 - Changes in routine
 - Interruption or impairment of stimming
 - Too much input from multiple senses
 - Can be induced by lack of parenting
 - Boundaries

Escalation Management

- **A**pproach in quiet, non-threatening manner
- **U**nderstand touching the patient may cause an unexpected reaction
- **T**alk in a calm, relaxed voice
- **I**nstructions and communication should be simple, specific, direct
- **S**eek to evaluate the situation as it is unfolding
- **M**aintain a safe distance

General Assessment of ASD Patients

1. Provide a safe environment

- If the patient is in a familiar and/or safe/comfortable environment:
 - Maintaining the patient in “their” environment while assessment is completed and treatment is started gives the patient a sense of control and safety
- Keep one familiar and knowledgeable caregiver/family member with the patient at all times
 - Have the caregiver bring you to the patient and introduce you

General Assessment of ASD Patients

2. Pay attention to all sensory inputs

- **Sight**
 - Avoid using bright/flashing lights /strobes, etc.
 - Avoid sudden / rapid / unexpected movements
 - Have your hands down at your side with palms open



General Assessment of ASD Patients

- **Sound**

- Avoid loud noises/sirens as much as possible



- Background noise can be very distracting
- Avoid banging on the door/using a loud voice when arriving

General Assessment of ASD Patients

- **Smell**
 - Unfamiliar or unexpected odors may cause overstimulation, even if the odor is not strong



General Assessment of ASD Patients

- **Touch**
 - Avoid physical contact as much as possible
 - Explain **EVERYTHING** (even the small stuff) to the patient prior to doing it
 - ASD patients may have a tactile hypersensitivity
 - adhesive products should be avoided

General Assessment of ASD Patients

3. Maintain clear, structured and organized approach

- Conduct assessments in orderly and logical sequence
- Allow time for the patient to process your explanations
- Questions, statements and commands should be simple, literal and concise

Assessment and Exam Tips

- Get down to their level
- Allow the patient space and to completely de-escalate before beginning any exam.
- If the pt is non-verbal, offer a smartphone, tablet device or something familiar to them to communicate

Assessment and Exam Tips

- Conduct exams distal to proximal, slowly
- Consider using visual supports as appropriate
 - Nausea, pain, etc.
- Warning signs
 - Increased restlessness, anxiousness or agitation may indicate patient is about to escalate.
 - Family/caregivers may pick up on these “warning signs” earlier.
- The patient may be hyper/hypo-tolerant of pain

Restraint

- Manual Restraint
 - Position one person on each side of patient, holding upper arms and wrist areas. Another person (or people) may hold lower extremities.
- Physical Considerations
 - 51% of persons age 2-18 years old with ASD have hypotonia⁷
 - underdeveloped trunk, abdominal and shoulder muscles.
- Avoid Manually Restraining:
 - Prone
 - Crossing their arms in front or behind

Restraint

- Mechanical Restraints
 - Use least restrictive method to get the job done
 - Soft restraints preferred
 - 4-point preferred over arms-only
- All agitated, restrained patients are at risk for sudden death from acidosis, excited delirium, and fatal arrhythmias

Restraint

- Chemical restraint should be considered in addition to mechanical restraint when agitation persists.
- Sedation/Chemical Restraint
 - Benadryl/Haldol/Ativan
 - Ketamine
 - Alternative benzos.



QUESTIONS ???



Thank You!

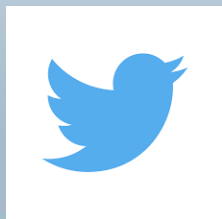
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Resources

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2. Patients with autism spectrum disorders: guidance for health professionals. The National Autistic Society, www.autism.org.uk.
3. Autism Spectrum Disorder: Data and Statistics. Centers for Disease Control and Prevention, www.cdc.gov.
4. Newschaffer, C.J., Croen, L.A., Daniels, J., Giarelli, E., Grether, J.K., Levy, S.E., Mandell, D.S., Miller, L.A., Pinto-Martin, J., Reaven, J., Reynolds, A.M., Rice, C.E., Schendel, D., & Windham, G.C. (2007). The epidemiology of autism spectrum disorders. *Annual Review of Public Health*. 28, 235-258.
5. Fombonne, E., Chakrabarti, S. (2001). No evidence for a new variant of measles-mump-rubella-induced autism. *Pediatrics*. 108(4), e58-e64.
6. McDermott, S., Zhou, L., & Mann, J. (2008). Injury treatment among children with autism or pervasive developmental disorder. *Journal of Autism and Developmental Disabilities*. 38, 626-633.
7. Ming, X., Brimacombe, M., Wagner, G.C. (2007). Prevalence of motor impairment in autism spectrum disorders. *Brain & Development*. 29, 565-570.
8. Frye, Richard E., and Daniel A. Rossignol. "Mitochondrial Dysfunction Can Connect the Diverse Medical Symptoms Associated with Autism Spectrum Disorders." *Pediatric research* 69.5 Pt 2 (2011): 41R–47R. PMC.
9. http://nationalautismassociation.org/wp-content/uploads/2018/03/NAA_Wandering-Brochure_0218.pdf

Resources

- Autism Preparedness For Emergency Medical Services Professionals (lecture notes and handout) revised 11.2009, Dean R. Kelbe, Jr., EMT-P
- http://nationalautismassociation.org/wp-content/uploads/2018/03/NAA_Wandering-Brochure_0218.pdf
- http://www.nationalautismassociation.org/wp-content/uploads/2018/03/NAA_First-Responder-Brochure_2018.pdf
- <https://www.autismbiology.com/>