

Basic Elements of Structured Teaching

An Introduction to Autism Spectrum Disorder (ASD)



Developed by Have Dreams (www.havedreams.org)

Partially Underwritten by The Autism Program of Illinois (TAP)
(www.theautismprogram.org)



About This Training

- Basic overview of Autism Spectrum Disorder (ASD)
- Definition, how ASD is diagnosed
- Introduction to the core characteristics of ASD
- Brief look at the current state of ASD knowledge
- “ASD culture”
- Overview of treatments and accommodations

Meet Temple Grandin



- [My Son is Artistic](#)

- HBO Films. (2010). *Temple Grandin*.

What is Autism Spectrum Disorder (ASD)?

- ASD is a developmental disorder that impacts the structure and functioning of the brain, interferes with normal development of verbal and nonverbal communication, social interaction, and sensory processing
- ASD occurs on a spectrum, with symptoms varying on an individual basis, ranging from mild to severe

- Baio J, Wiggins L, Christensen DL, et al. Prevalence of Autism Spectrum Disorder Among Children Aged 8 Years — Autism and Developmental Disabilities Monitoring Network, 11 Sites, United States, 2014. *MMWR Surveill Summ* 2018;67(No. SS-6):1–23. DOI: <http://dx.doi.org/10.15585/mmwr.ss6706a1>

What is Autism Spectrum Disorder (ASD)?

- Commonly comorbid with autism: Epilepsy (25-40%), GI Disorders (85%), Sleep Problems (50-80%), Psychiatric Conditions (ADHD, Anxiety, Depression) (85%)
- Older diagnoses: Asperger Syndrome, Pervasive Developmental Disorder Not Otherwise Specified (PDD-NOS), etc.
 - Removed from the DSM-V in 2013 – now simply diagnosed as Autism Spectrum Disorder (ASD)

- The Children's Hospital of Philadelphia. (2017, June 14). Autism's Clinical Companions: Frequent Comorbidities with ASD | Children's Hospital of Philadelphia. Retrieved August 31, 2019, from Chop.edu website: <https://www.chop.edu/news/autism-s-clinical-companions-frequent-comorbidities-asd>
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Washington, DC: Author.

Meet Greta Thunberg



- [Greta](#)

- CBS This Morning. (2019). Greta Thunberg on the "gift" of Asperger's in fighting climate change: "We need people who think ..." [YouTube Video]. Retrieved from <https://www.youtube.com/watch?v=BQ4rBLCpEeM>

ASD DSM-V Diagnostic Criteria

- 1) Persistent deficits in social communication and interactions across multiple contexts
 - Includes: social-emotional reciprocity, nonverbal communication, understanding/developing/maintaining relationships
- 2) Restricted or repetitive patterns of behavior, interests, or activities (at least two of the following):
 - Repetitive speech, motor movements, object usage
 - Excessive adherence to routines, resistance to change (insistence on sameness)
 - Ritualized patterns of behavior (verbal or non-verbal)
 - Abnormally intense or focused restricted interests
 - Hyper or hypo-reactivity to sensory input, or unusual interest in sensory aspects of the environment
- 3) Symptoms present in early childhood (may fully manifest later, when social demands increase)
- 4) Symptoms together limit and impair everyday functioning in social, occupational, or other areas of life
 - Severity measured on a 1 to 3 scale
- 5) Not better explained by another intellectual/developmental disability

ASD DSM-V Diagnostic Criteria

Specify if:

- 1) Accompanied by intellectual impairment
- 2) Accompanied by language impairment
- 3) Associated with a known medical/genetic condition or environmental factor
- 4) Associated with another neurodevelopmental, mental, or behavioral disorder
- 5) With catatonia

- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Washington, DC.

ASD Diagnosis

- No medical tests – only used to rule out comorbid disorders
- Based on observation and evaluation by a multidisciplinary team
- Autism Diagnostic Observation Schedule (ADOS) – gold standard for diagnosis
- Early diagnosis (about 14 months) critical
- Medical diagnosis vs. school diagnosis

Meet Peg and Tiny



- [“Dreaded Diagnosis”](#)

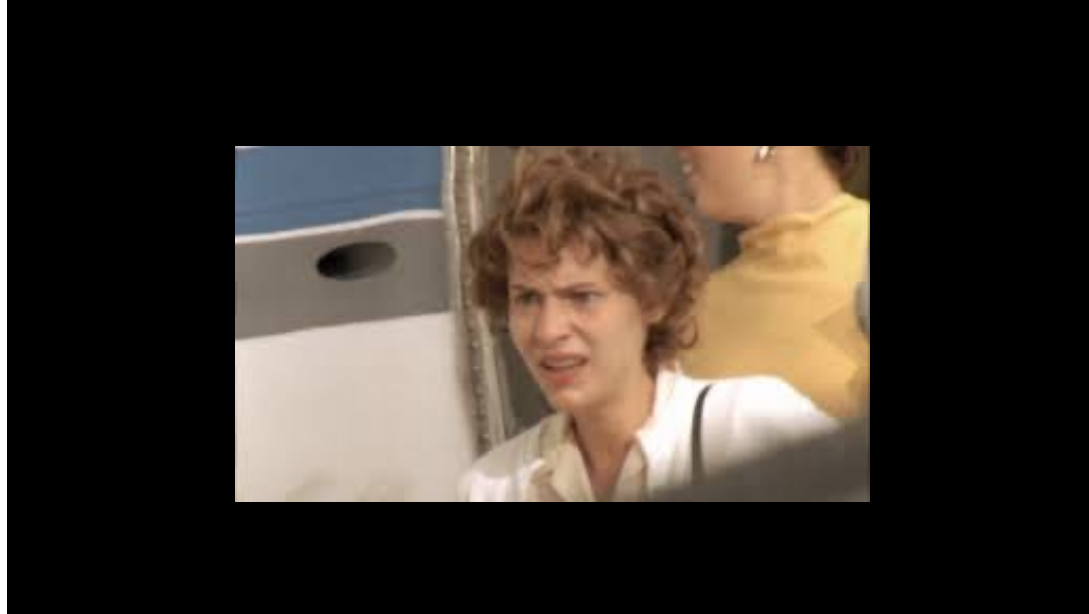
Core Characteristics of ASD

There are two large, overarching characteristics that play into every other symptom of autism:

ANXIETY & OVERSTIMULATION

- Van Steensel, F.J.A., Bogels, S.M., & Perrin, S. (2011). Anxiety disorders in children and adolescents with autistic spectrum disorders: A meta-analysis. *Clinical Child and Family Psychology Review*, 14, 302-317.
- Frontiers. (2015, June 2). Social and sensory overstimulation drives autistic behaviors, animal study suggests. *ScienceDaily*. Retrieved September 1, 2019 from www.sciencedaily.com/releases/2015/06/150602164024.htm

Temple Grandin



- [See the Heat](#)

- HBO Films. (2010). *Temple Grandin*.

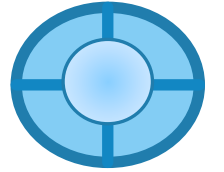
Core Characteristics of ASD



Core Characteristics of ASD



Communication



- “It’s like a secret language everyone understands except me.”
- Receptive: Communication more overwhelming to process (like a foreign language)
 - HOWEVER: In that environment, neurotypical people can still read social cues, body language, etc.
 - Expressive: Given receptive difficulties, it’s more natural to not verbally express oneself

- Wahlberg, T. J. (2010). *Finding The Gray: Understanding and Thriving in the Black and White World of Autism and Aspergers*. Geneva, IL: Wahlberg & Associates.

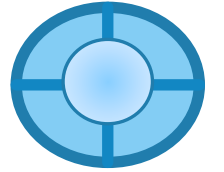
Temple Grandin



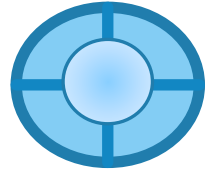
- Greeting



Social Interaction



- “It feels like everybody else is in a parallel dimension – I can see them, but I’m not with them.”
- Childhood: Everyone is playing outside at recess, one child keeps to themselves
 - What could be going on: wants to play but doesn’t know how, needs to decompress
 - Adulthood: Invited out to a bar with coworkers, declines



Sensory Processing

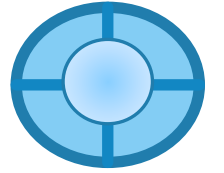
- “Everything was scary, and it hurt too much.”
- Sensory processing issues involve all five senses
- Sensations are generally processed more intensely
 - Intense sensations will vary according to the individual
- Tendency to fixate on certain sensations
 - The world is chaotic, positive sensations are generally rare
- Do whatever is necessary to filter out unpleasant sensations

Coping Mechanism



- Letters and Numbers

Behavior



- “In an uncomfortable situation, I just leave without saying a word.”
- Behavior among people with ASD may be unusual, but that doesn't mean it's deviant
- Reasons: Alternative method of communication, sensory maintenance, comfort

Meet Sam from Atypical



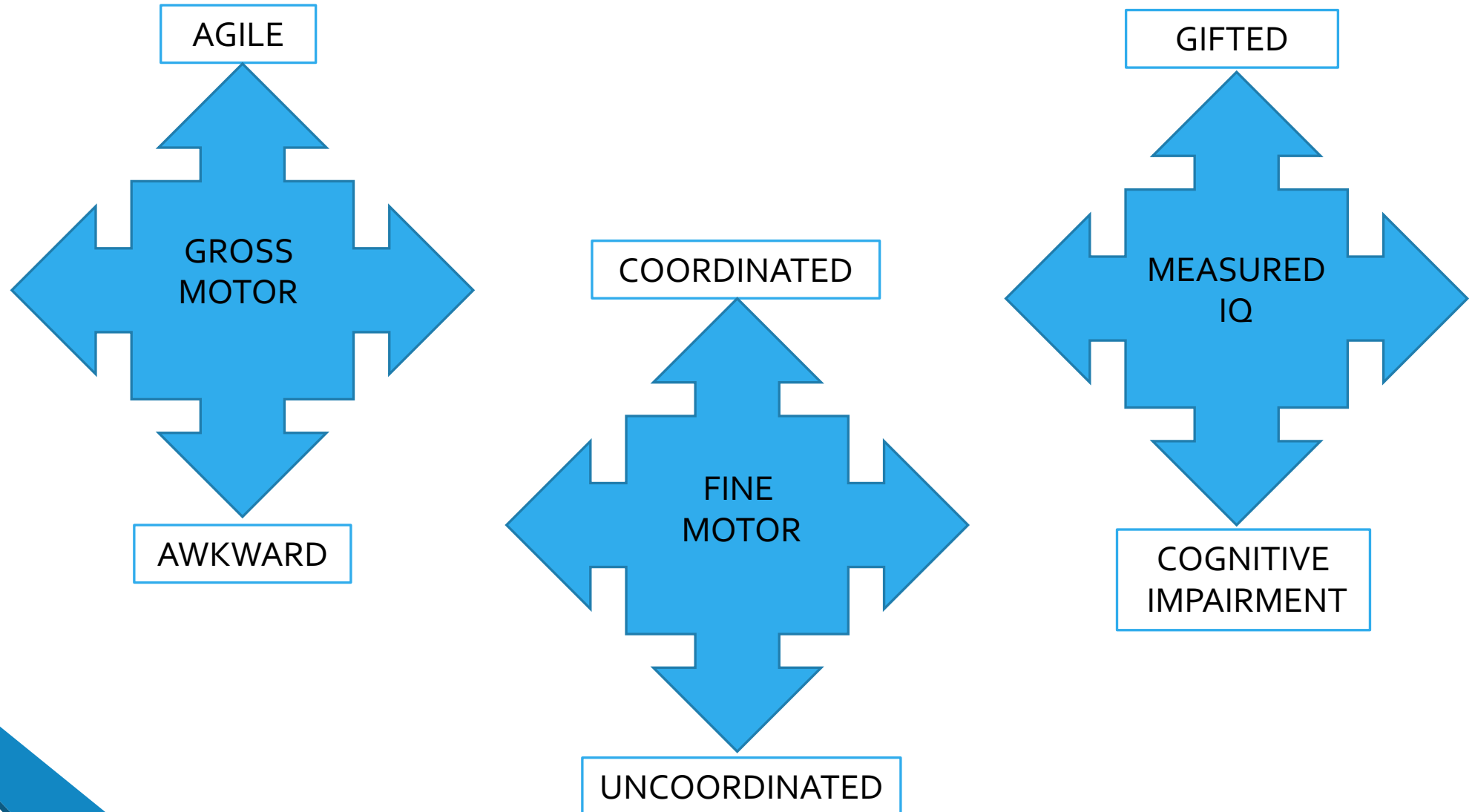
- Sleepover



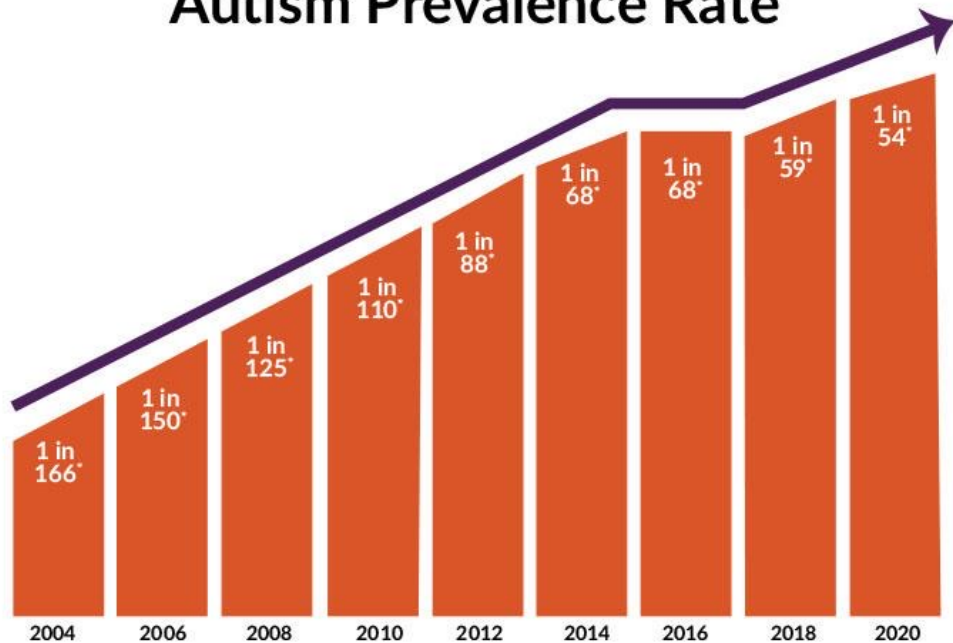
- Police

- Netflix. (2018, September 7). In The Dragon's Lair. *Atypical*.
- Netflix. (2018, September 7). The Smudging. *Atypical*.

Motor Skills and Measured IQ

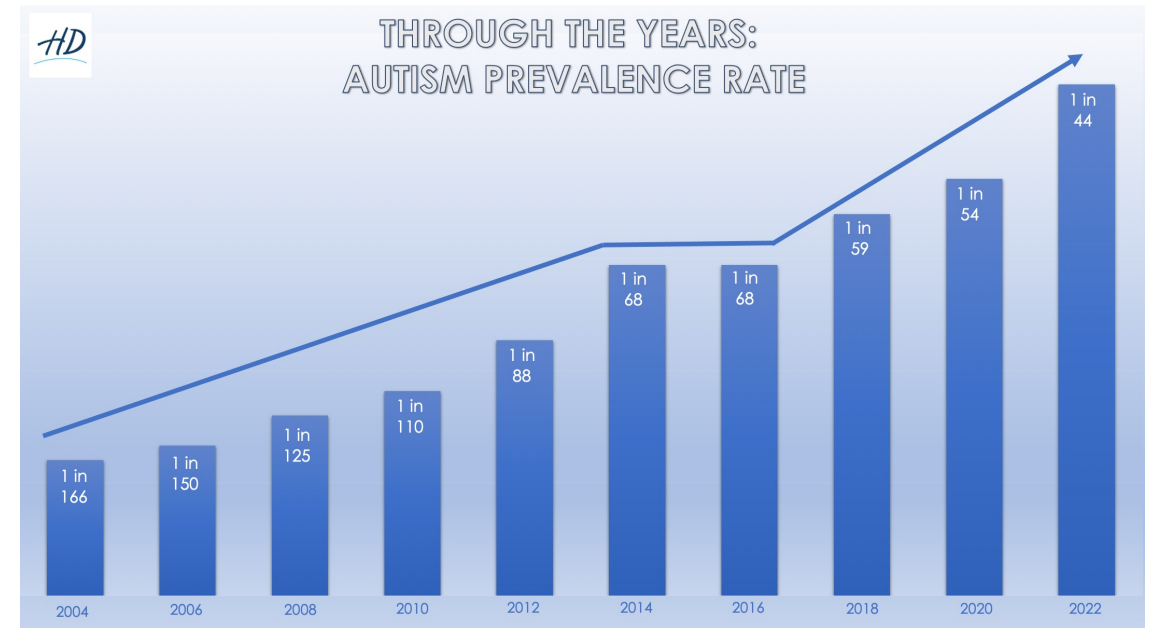


Through the Years: Autism Prevalence Rate



*Centers for Disease Control (CDC) prevalence estimates are for 4 years prior to the report data. i.e 2020 figures are from 2016.

2022



*the prevalence rate has changed since this video was recorded in 2020.

Baio J, Wiggins L, Christensen DL, et al. Prevalence of Autism Spectrum Disorder Among Children Aged 8 Years — Autism and Developmental Disabilities Monitoring Network, 11 Sites, United States, 2014. *MMWR Surveill Summ* 2018;67(No. SS-6):1–23. DOI: <https://dx.doi.org/10.15585/mmwr.ss6706a1>

ASD – What We Know (Epidemiology)

- 1 in 59 have autism – up from 1 in 150 in 2000
- “Fastest growing” developmental disability
- Sometimes framed as an “epidemic” – sensationalistic and inaccurate
 - Real causes for increase:
 - Widening of the spectrum
 - Greater understanding of autism among population
 - Better at diagnosing

- Shattuck PT. The Contribution of Diagnostic Substitution to the Growing Administrative Prevalence of Autism in US Special Education. PEDIATRICS 2006;117:1028–1037.

ASD – What We Know (Epidemiology)

- The number of diagnosed men outnumber women 3:1
 - Likely there are as many women with autism, but they are diagnosed less commonly, or much later in life
 - Autism manifests differently in women, women are better able to mask their symptoms, and doctors are less inclined to believe women
- ASD impacts every race, ethnicity, and socioeconomic status indiscriminately
 - Racial minorities and those of low SES are less likely to be diagnosed, due to lack of resources and services

• Maureen S. Durkin, et al. **Autism Spectrum Disorder Among US Children (2002–2010): Socioeconomic, Racial, and Ethnic Disparities**. *American Journal of Public Health*, 2017; 107 (11): 1818 DOI: [10.2105/AJPH.2017.304032](https://doi.org/10.2105/AJPH.2017.304032)

• The Autism Dilemma for Women Diagnosis | Organization for Autism Research. (2018, October 26). Retrieved September 1, 2019, from Researchautism.org website: <https://researchautism.org/the-autism-dilemma-for-women-diagnosis/>

ASD – What We Know (Causes)

- There is still much we don't understand about the causes of autism
- Many popular theories regarding the cause of autism have been thoroughly debunked
 - “Refrigerator Mothers”
 - Vaccines

- Silberman, S. (2016). *Neurotribes: the legacy of autism and how to think smarter about people who think differently*. London: Allen & Unwin.

Temple Grandin

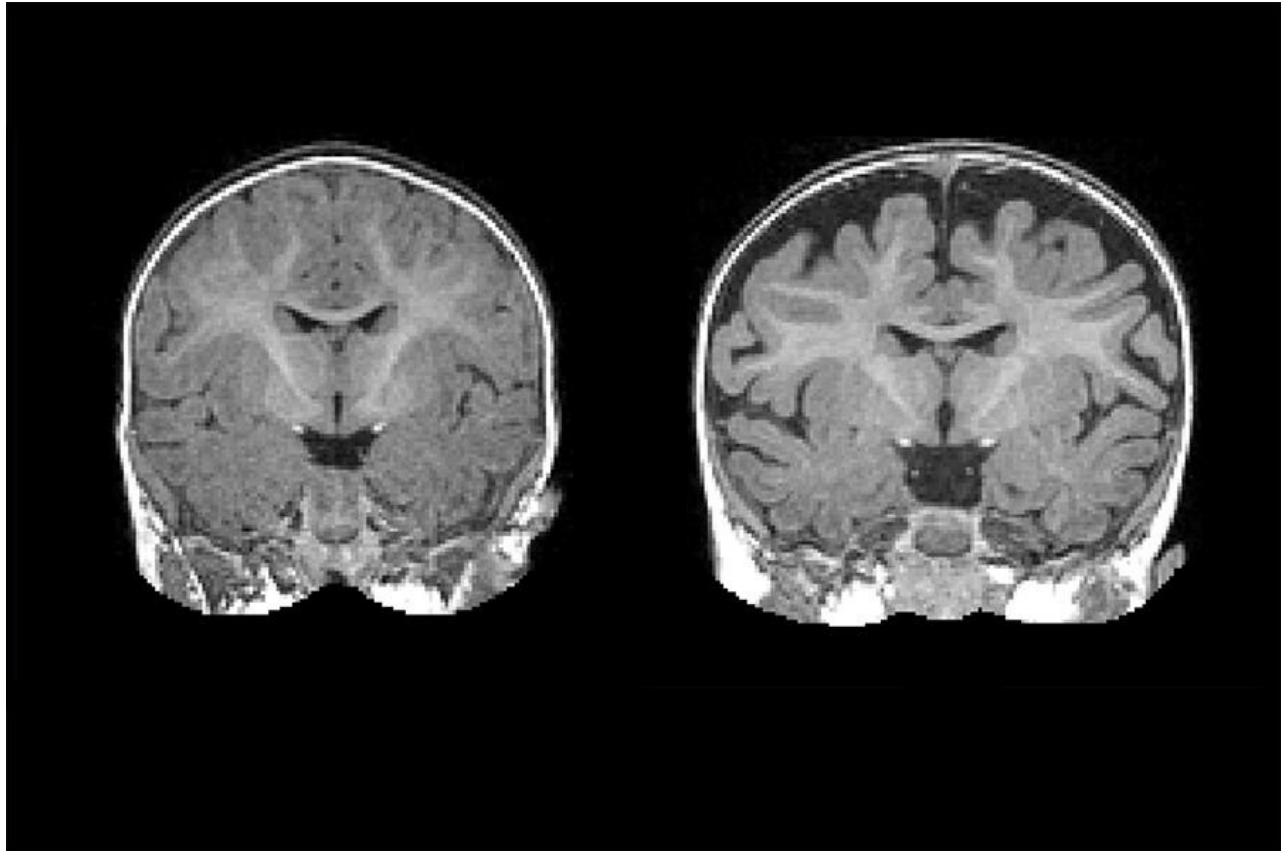


- [The Dark Side of Autism Diagnosis](#)

ASD – What We Know (Causes)

- Evidence points to differences in brain structure
 - One example: increased cerebrospinal fluid in childhood correlated to autism
- Overwhelming evidence for genetic causes
 - At least 80% reliant on inherited genes

- Bai D, Yip BHK, Windham GC, et al. Association of Genetic and Environmental Factors With Autism in a 5-Country Cohort. *JAMA Psychiatry*. Published online July 17, 2019. doi:10.1001/jamapsychiatry.2019.1411
- Martinez, R. (2017, March 6). UNC Study Links Autism To Increased Cerebrospinal Fluid. Retrieved from <https://www.wunc.org/post/unc-study-links-autism-increased-cerebrospinal-fluid>.



ASD - What We Know (Adulthood)

- ASD lasts a lifetime, yet so much has been focused on children
 - Virtually no infrastructure in place to assist adults on the spectrum
 - “It’s only in the last 10 to 15 years that there’s been growing recognition of the fact that children grow up to be adults.” - Susan Daniels, executive secretary of the Interagency Autism Coordinating Committee (2016)
- ASD impacts development, development impacts ASD

ASD - What We Know (Adulthood)

- 200,000 children with ASD will become adults in the next 5 years
- ASD unemployment rate: between 85-90%
- What can be done NOW to improve the futures of autistic adults?
 - Abrams, A. (2016, September 22). You're autistic. You know you can do a good job, but will employers listen? *The Washington Post*. Retrieved from https://www.washingtonpost.com/national/health-science/youre-autistic-you-know-you-can-do-a-good-job-but-will-employers-listen/2016/09/22/412956bc-4dca-11e6-a422-83ab49ed5e6a_story.html
 - Carr, S. (2017, September 22). The Tricky Path to Employment Is Trickier When You're Autistic. Retrieved November 20, 2019, from Slate Magazine website: <https://slate.com/business/2017/09/how-autism-complicates-the-path-to-employment.html>
 - Sparrow, M. (2018, February 26). Why Is the Autistic Unemployment Rate So High? Retrieved November 20, 2019, from Thinkingautismguide.com website: <http://www.thinkingautismguide.com/2018/02/why-is-autistic-unemployment-rate-so.html>