

# MEDICAL MEMO

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## Autism Spectrum Disorder (ASD)

The DSM-5 (Diagnostic and Statistical Manual – 5<sup>th</sup> edition) was published in May 2013. Each new edition updates mental health diagnoses and the criteria used to make these diagnoses based on clinical experience and research in the prior decade or so. DSM-5 replaced Pervasive Developmental Disorder, Autism, and Asperger's Disorder with one diagnosis – Autism Spectrum Disorder, ASD for short. Textbooks, insurance, schools, and other agencies are adjusting to the change.

### Autistic Spectrum Disorder Screen Before turning 3, does your child...

Does your child enjoy being swung, bounced on your knee, etc?

Does your child take an interest in other children?

Does your child like climbing on things, such as stairs?

Does your child enjoy playing peek-a-boo/hide-and-seek?

Does your child ever PRETEND, for example, to make a cup of tea using a toy cup and teapot, or pretend other things?

Does your child ever use his/her index finger to point, to ASK for something?

Does your child ever use his/her index finger to point, to indicate INTEREST in something?

Can your child play properly with small toys (e.g. cars or bricks) without just mouthing, fiddling or dropping them?

Does your child ever bring objects over to you (parent) to SHOW you something?

I have included the prior criteria and the new criteria in boxes for your review. Notice the separate language

criteria will be gone and are folded into the remaining two groups (A+B) of criteria. Notice that the patient will have to meet more of the remaining more specific criteria (all 3 in A, at least 2 in B) which improves accuracy. Severity ratings are provided in DSM-5. DSM-5 also changes Mental Retardation, a term that sounds dated and pejorative, to Intellectual Disability (or Intellectual Developmental Disorder - IDD). DSM-5 also adds Social Communication Disorder that is similar to ASD criteria group A but does **not** include the restricted and repetitive patterns of ASD group B criteria.

The prevalence of Autistic Spectrum Disorder (ASD) in the US is estimated at 1 in every 150 to 250 eight year olds. This is 10 times the rate of Autism fifty years ago – a huge increase that has led to much conjecture as to why. It is instructive to notice that 50 years ago only Autism counted and now the whole spectrum counts. Additionally, both doctors and the public have learned these conditions exist and much better how to recognize them since the addition of Asperger's to the DSM in 1994. Many cases of ASD that were missed before the late 1990's are no longer missed.

What causes Autism and its cousins? Not vaccinations – multiple studies have proven this and the original article raising this concern has been discredited. The causes are not well understood yet except that there is a complex interplay of genetic predisposition and environmental factors. 90% of the time there is no specific discernible cause. The cause is usually idiopathic (meaning we don't know why) with the most common known causes being Fragile X, Down's Syndrome, Tuberous Sclerosis, and other genetic disorders. Even cases of ASD without an identifiable cause seem to run in families – if one child has ASD the risk of another sibling having ASD is 5-10%. Males are much more likely than females to have an ASD. "Bad" parenting does not cause Autism, Asperger's or the other ASDs. Lower tested intelligence scores, seizures, sensory sensitivities, coordination and clumsiness problems, inattention, anxiety, obsessive compulsive

behavior, sleep, temper, and language problems are commonly associated with or part of ASD.

#### Current DSM-IV-TR Diagnostic Criteria for Autism

- A.** A total of six (or more) items from (1), (2), and (3), with at least two from (1), and one each from (2) and (3).
- (1) qualitative impairment in social interaction, as manifested by at least two of the following:
    - (a) marked impairment in the use of multiple nonverbal behaviors such as eye-to-eye gaze, facial expression, body postures, and gestures to regulate social interaction
    - (b) failure to develop peer relationships appropriate to developmental level
    - (c) a lack of spontaneous seeking to share enjoyment, interests, or achievements of other people (e.g., by a lack of showing, bringing, or pointing out objects of interest)
    - (d) lack of social or emotional reciprocity
  - (2) qualitative impairments in communication as manifested by at least one of the following:
    - (a) delay in, or total lack of, the development of spoken language (not accompanied by an attempt to compensate through alternative modes of communication such as gesture or mime)
    - (b) in individuals with adequate speech, marked impairment in the ability to initiate or sustain a conversation with others
    - (c) stereotyped and repetitive use of language or idiosyncratic language
    - (d) lack of varied, spontaneous make-believe play or social imitative play appropriate to developmental level
  - (3) restricted repetitive and stereotyped patterns of behavior, interests, and activities, as manifested by at least one of the following:
    - (a) encompassing preoccupation with one or more stereotyped and restricted patterns of interest that is abnormal either in intensity or focus
    - (b) apparently inflexible adherence to specific, nonfunctional routines or rituals
    - (c) stereotyped and repetitive motor mannerisms (e.g., hand or finger flapping or twisting, or complex whole-body movements)
    - (d) persistent preoccupation with parts of objects
- B.** Delays or abnormal or abnormal functioning in at least one of the following areas, with onset prior to age 3 years: (1) social interaction, (2) language as used in social communication, or (3) symbolic or imaginative play.

Although superficially normal language skills may occur, persons with ASD often have notable tone, rhythm, verbosity, and concreteness (lack of ability to communicate and think well abstractly) challenges. Severe impairment in Autism is often obvious quickly while the also severe life disruption of moderate ASD

#### Autism Spectrum Disorder (Proposed for DSM-5)

Must meet criteria A, B, C, and D:

- A.** Persistent deficits in social communication and social interaction across contexts, not accounted for by general developmental delays, and manifest by all 3 of the following:
1. Deficits in social-emotional reciprocity; ranging from abnormal social approach and failure of normal back and forth conversation through reduced sharing of interests, emotions, and affect and response to total lack of initiation of social interaction,
  2. Deficits in nonverbal communicative behaviors used for social interaction; ranging from poorly integrated- verbal and nonverbal communication, through abnormalities in eye contact and body-language, or deficits in understanding and use of nonverbal communication, to total lack of facial expression or gestures.
  3. Deficits in developing and maintaining relationships, appropriate to developmental level (beyond those with caregivers); ranging from difficulties adjusting behavior to suit different social contexts through difficulties in sharing imaginative play and in making friends to an apparent absence of interest in people
- B.** Restricted, repetitive patterns of behavior, interests, or activities as manifested by at least two of the following:
1. Stereotyped or repetitive speech, motor movements, or use of objects; (such as simple motor stereotypies, echolalia, repetitive use of objects, or idiosyncratic phrases).
  2. Excessive adherence to routines, ritualized patterns of verbal or nonverbal behavior, or excessive resistance to change; (such as motoric rituals, insistence on same route or food, repetitive questioning or extreme distress at small changes).
  3. Highly restricted, fixated interests that are abnormal in intensity or focus; (such as strong attachment to or preoccupation with unusual objects, excessively circumscribed or perseverative interests).
  4. Hyper- or hypo-reactivity to sensory input or unusual interest in sensory aspects of environment; (such as apparent indifference to pain/heat/cold, adverse response to specific sounds or textures, excessive smelling or touching of objects, fascination with lights or spinning objects).
- C.** Symptoms must be present in early childhood (but may not become fully manifest until social demands exceed limited capacities)
- D.** Symptoms together limit and impair everyday functioning.

becomes more apparent as developmental problems transitioning to elementary school, middle school, high school, college, jobs, roommates, romance, etc caused by being so atypical and out of step in relationships with odd habits (stereotypies), behaviors (eg, ignores hygiene, fashion, or basic manners and courtesy) and excessive but limited interests (eg, dinosaurs, jets, bus routes,

movie talk) mushroom over the years and in crises. Occasionally, the fortunate combination of high intelligence and exclusive focus in a limited and even esoteric area results in socially rewarded “genius” or “savant” in art, music, math, rocket science, astronomy, research, computer science, etc. Please read the DSM 5 section on ASD for more helpful examples and details.

As in most conditions the prognosis or future prospects are often better with early diagnosis and treatment. However, the younger the age the harder to be sure about the diagnosis. Fortunately, screening tools are available which can be used in the pediatrician’s or family practitioner’s office, in schools and preschools, and in outreach agencies including Child Find available through your neighborhood public elementary school. These persons can refer or you can directly seek more in depth evaluation or testing by a child psychiatrist, developmental pediatrician, pediatric neurologist, child psychologist, masters level therapist, speech and language therapist, occupational or physical therapist, etc. Depending on the signs and symptoms, family history, age, developmental level of the child, and other factors, developmental screening or evaluations may be followed up by blood or urine tests, chromosomal and gene testing, intellectual, learning, language and cognitive testing, an EEG or MRI, or other options. **See the screening list provided in this Medical Memo.** The M-Chat, available online is even better screening form. Before your child turns 3 he or she should enjoy being swung or bounced on your knee, show an interest in other children, like simple climbing, enjoy peek a boo, pretend, point to ask for something, point to indicate interest in things, play with small toys, and bring objects to show you. If not, seek evaluation. Fortunately, because early intervention often saves much cost, time, and money the Arizona Department of Developmental Disabilities (DDD) will provide free intervention services for infants to (at least) 6 year olds with physical, language, behavioral or other developmental delays even without an ASD label or diagnosis. DDD in combination with your local school district via Child Find will provide services including specialized preschool beginning as young as your child’s 2<sup>nd</sup> birthday. After roughly the age of 6, youth and adults must have at least one of four qualifying conditions **and** severe impairment in 3 of the 7 “domains of function” to continue to qualify for DDD services. The 4 qualifying conditions are Autism (diagnosis code 299.0; **not** Asperger’s, NLD, ASD, or PDD), Cerebral Palsy, Epilepsy, or Mental Retardation. The domains of function include self-care, receptive and expressive language, learning,

mobility, self direction, capacity for independent living, and economic self sufficiency.

Because these conditions deeply affect a broad range (ie, pervasive) of growth and development for many years, if not lifelong, a broad, even confusing, range of interventions are being developed and offered. Many, even common mainstream, techniques have not been well studied or proven effective. So what interventions are currently believed to have the best potential benefit and are most cost effective? **Early specialized comprehensive social communication education is central.** Structured teaching of social interaction, social communication, and pragmatic social language skills (eg, TAFE and the UA Speech and Language program in Tucson; socialthinking.com) cannot be overemphasized beginning when the first signs and symptoms of ASD appear. Teaching and rehearsing social language interactions overlap with behavior therapy interventions known as “Functional Behavioral Analysis” and the relationship building techniques of Dr. Greenspan’s “Floor Time” approach known as Developmental, Individual difference, Relationship based (DIR). Speech and language approaches can include “total communication” using visual enhancements like sign language, gestures, pictures (PECS), and technology like modified computers to facilitate language communication such as “Aug-Com” (Augmentive Communication) devices when language is severely delayed. Occupational and Physical Therapists have much to offer many ASD youth to help coordination, muscle tone, dysgraphia (handwriting related delays) and especially the common Sensory Integration problems and sensitivities that can be overwhelming. Directly teaching and practicing social skills to overcome the failure to see, read, and grasp basics of body language, eye contact, posture, common courtesy, and the social niceties known as Dyssemia (eg, Teaching Your Child The Language Of Social Success in my website book list). “Social Stories” are a written, reading and drawing technique to teach social skills that takes advantage of the often relatively strong visual thinking of many people with ASD to help understand how, what, and why other people think, feel and behave as they do.

More classic psychotherapies tailored to the age and developmental needs of the youth are often helpful in providing needed support, guidance, and counseling to the child, parent and siblings.

Medications do not get at the core underlying brain disorder in the Autism spectrum. The atypical antipsychotics like risperidone, Abilify, and ziprasidone come closest. This is a fairly “big gun”, though potentially very helpful family of medicines. A wide

range of other medicines described in my Medicine Charts and other Medical Memos are used to target specific symptoms or behaviors that are common in ASD like sleep problems, attention disorder, hyperactivity, irritability, seizures, some eating problems, some toileting problems, and various forms of anxiety including social anxiety, panic or obsessive and compulsive patterns.

A wide range of biologic and non biologic alternative and complementary treatments have been or are being tried based on some plausible and sometimes implausible theories. Some have not panned out or are costly, or even possibly detrimental. These include yeast as cause of ASD treated by nystatin or a “yeast free diet” and supplements, secretin as a gastro-intestinal modulator, avoiding vaccines especially including thimerosal’s mercury, removing dental fillings made from an amalgam containing mercury, immunotherapy, chelation for mercury and other heavy metals, and “facilitated communication” etc. Others which are not well documented but are likely not harmful other than possibly the time, energy, and cost include supplemental digestive enzymes, probiotics, high dose of vitamins or supposed vitamins, other supplements, gluten-casein free diets, other special diets, auditory integration therapy, behavioral optometry, music therapy, fish or flax oil omega 3 or 6 supplements, craniosacral therapy, the Dore Method, and many more. Although Omega 3 fatty acids have not shown statistical proof of benefit they do “trend” toward superiority over placebo for hyperactivity. Many families I see do try various alternative

treatments. I am always interested to hear of their experiences, some of which they find helpful.

Independence as contributing members of society; happy with self supporting jobs, hobbies, a family of their own, and a life of meaning or spirituality are big parts of what parents want for our kids. Some people with ASD attain all of this and more; others achieve some but need supports; some need lengthy or lifelong supervision up to 24 hours a day. Guardianship (of which there are multiple levels), Social Security disability, and other public and private agencies may come into play for supervised living, work, insurance, ongoing skill building, and other assistance. With the growing numbers of older teens and young adults with ASD needing enhanced skills toward independent living, new treatment, education, and life skills models are needed. One such idea is that of Chapel Haven ([chapelhaven.org](http://chapelhaven.org)) which has a new program here in Tucson. Overall, higher tested intelligence and especially better social communication including a willingness to go along with social niceties that may make no sense to the person with ASD is associated with a better prognosis. Remember, **the best predictor of better outcome is the development of social communication and thinking that is also known as pragmatic social language skills. Persevering with these supports and treatments typically optimize outcome. Along with anything else you try, pursue this area vigorously and persistently.** Frequently there is improvement with age. Please see the [mental health links](#) section of my website for more.

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