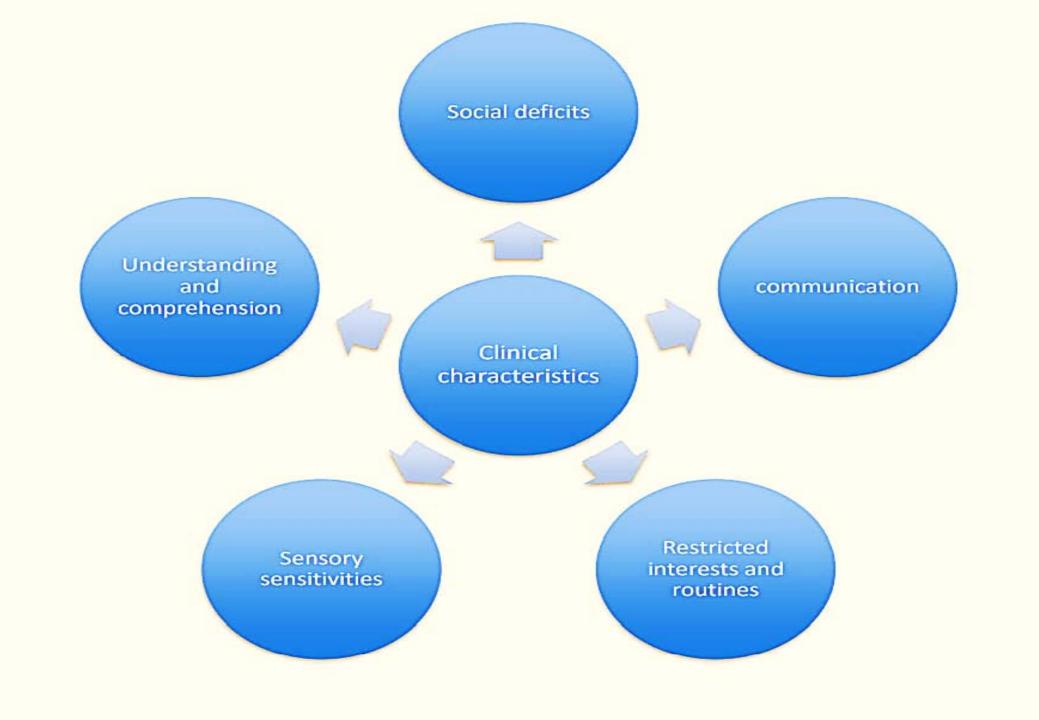
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Red Flags for Autism



If there are concerns with <u>any</u> of the following, parents can:

- Request that their Family Doctor make a referral to a Paediatrician
- Have their child assessed by a Speech-Language Pathologist





Communication Red Flags

- No babbling by 11 months of age
- No simple gestures by 12 months (e.g., waving bye-bye)
- No single words by 16 months
- No two-word phrases by 24
 months (noun + verb e.g., "baby
 sleeping")
- No response when name is called, causing concern about hearing
- Loss of any language or social skills at any age

Behavioural Red Flags

- Odd or repetitive ways of moving fingers or hands
- Oversensitive to certain textures, sounds or lights
- Lack of interest in toys, or plays with them in an unusual way (e.g., lining up, spinning, opening/closing parts rather than using the toy as a whole)
- Compulsions or rituals (has to perform activities in a special way or certain sequence; is prone to tantrums if rituals are interrupted)
- Preoccupations with unusual interests, such as light switches, doors, fans, wheels
- Unusual fears

Social Red Flags

- Rarely makes eye contact when interacting with people
- Does not play peek-a-boo
- Does not point to show things he/ she is interested in
- Rarely smiles socially
- More interested in looking at objects than at people's faces
- Prefers to play alone
- Does not make attempts to get parent's attention; doesn't follow/ look when someone is pointing at something
- Seems to be "in his/her own world"
- Does not respond to parent's attempts to play, even if relaxed
- Avoids or ignores other children when they approach

Diagnosis: DSM-IV to DSM-5

Social Interaction

Communication

Restricted/ Repetitive Interests and Behaviors

DIAGNOSTIC AND STATISTICAL
MANUAL OF
MENTAL DISORDERS
FOURTH EDITION
TEXT REVISION

- DSM-IV-TR

Social Communication Restricted/
Repetitive
Interests
and
Behaviors

DIAGNOSTIC AND STATISTICAL MANUAL OF MENTAL DISORDERS
FIFTH EDITION

DSM-5

AMERICAN PSYCHIATRIC ASSOCIATION

ASD is the name for a group of neurodevelopmental disorders

DSM V changes to the diagnosis of Autism:

- One <u>broad category</u> of autism spectrum disorder (ASD)
- Two categories of symptoms
 - ✓ social-communication impairment
 - ✓ repetitive/restricted behaviors
- Social communication disorder

| ICD-10 | DSM-IV | DSM-5 | ICD-11 |
|---|--|---|---|
| Pervasive Developmental Disorders: Childhood autism Asperger syndrome Atypical autism PDD-other PDD-unspecified | Pervasive Developmental Disorders: Autistic disorder Asperger's disorder PDD NOS | Autism spectrum disorder | Autism spectrum disorder |
| 3 symptom domains | 3 symptom domains | 2 symptom domains Including sensory sensitivities | 2 symptom domains Including sensory sensitivities |
| | | | |
| Onset by age 3 | Onset by age 3 | Removes age of onset | Removes age of onset |
| Atypical autism | PDD NOS | Social (pragmatic) communication disorder | Developmental language disorder |
| Comorbidity exclusions | Comorbidity exclusions | Allows co-occurring diagnoses | Allows co-occurring diagnoses |
| | | | |

- □ Deficits in social communication (all 3)
 - ✓ Deficits in social and emotional reciprocity
 - ✓ Deficits in nonverbal communication
 - ✓ Deficits in maintaining relationships
- □ Restricted, repetitive patterns of behavior, interest, and activities (2)
 - ✓ Stereotyped motor or verbal behavior
 - ✓ Restricted, fixated interests
 - ✓ Excessive adherence to routines and ritualized bhx.
 - ✓ Unusual sensory behavior
- □ Symptoms present in early childhood

Deficits in social-emotional reciprocity

- Abnormal social approach
- Failure of normal back-forth conversation
- Reduced sharing of interests, emotions, or affect
- Failure to initiate or respond to social interactions

Deficits in nonverbal communicative behaviors

- Poorly integrated verbal and nonverbal communication
- Abnormalities in eye contact and body--language
- Deficits in <u>understanding</u> and <u>use</u> of gestures
- Total lack of facial expression and nonverbal communication

Deficits in developing & maintaining relationships

- Difficulties adjusting behavior to suit various social contexts
- Difficulties in sharing imaginative play or in making friends
- Absence of interest in peers

- > Stereotyped /repetitive motor movements, use of objects or speech
 - ✓ Simple motor stereotypies
 - ✓ Lining up toys or flipping objects
 - ✓ Echolalia
 - ✓ Idiosyncratic phrases

- Insistence on <u>sameness</u>, inflexible adherence to <u>routines</u> or <u>ritualized</u> patterns of verbal/nonverbal behavior
- ✓ Simple motor extreme distress at small changes
- ✓ Difficulties with transitions
- ✓ Rigid thinking patterns
- ✓ Greeting rituals
- ✓ Need to take same route or eat same food every day

- ► Highly <u>restricted</u>, fixated interests that are abnormal in <u>intensity</u> or <u>focus</u>
 - ✓ Strong attachment to or preoccupation with unusual objects
 - ✓ Excessively circumscribed or perseverative interests

- > Hyper/hypo-reactivity to sensory input
- > or Unusual interest in sensory aspects of environment
 - ✓ Apparent indifference to pain/temperature
 - ✓ Adverse response to specific sounds or textures
 - ✓ Excessive smelling or touching of objects
 - ✓ Fascination with lights or spinning objects

Severity rating be given for each domain

Ratings include:

Level 3: Requiring very substantial support

Level 2: Requiring substantial support

Level 1: Requiring support

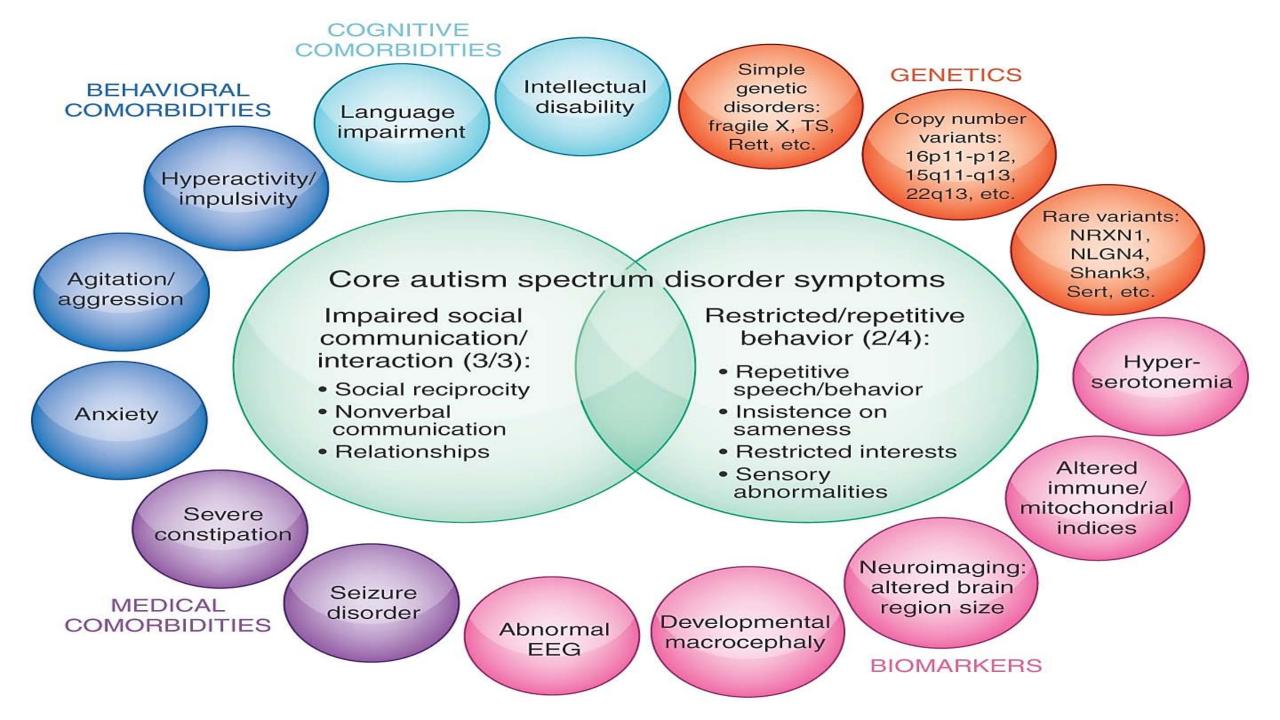
Behaviors/symptoms not captured in DSM-5 ASD

> Problems with play/imagination

- ✓ Impairments in imaginative/symbolic play
- ✓ Lack of functional play skills
- ✓ Difficulty distinguishing fantasy from reality
- > Shyness/social anxiety

> Language and developmental delays

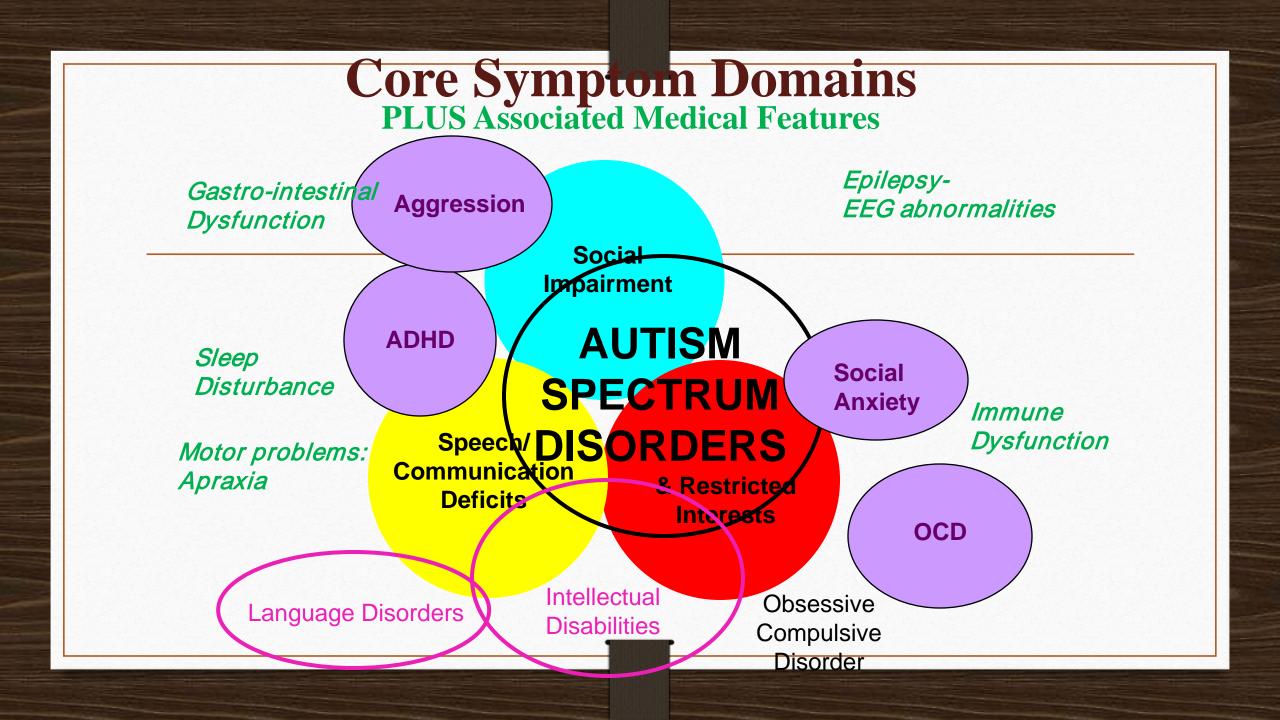
- ✓ Milestone delays/developmental delays
- ✓ Speech delays (expressive or receptive)
- ✓ Language disorder
- > Behavioral difficulties/temper tantrums
- > Poor imitation skills



| Tantrum | Meltdown | |
|---|--|--|
| Giving child an item or bribe can calm | Handing a child his favourite thing may | |
| them | just result in it being thrown across the | |
| | room, and then further tears later when | |
| | calm because it broke | |
| Child looks at and gauges audience | Child does not care how audience is | |
| reaction | reacting, they are just doing they are doing | |
| The child having a tantrum will be careful | The child melting down is oblivious to | |
| not to hurt themselves or others | their surroundings | |
| A soon as the causing situation is resolved | A meltdown has to run its course. It is very | |
| the child having a tantrum will calm down | rare that a parent can resolve a meltdown | |
| and settle | unless they know what sensory input may | |
| | help sooth their child | |
| Tantrums are thrown to manipulate | A meltdown happens because a child is | |
| people and achieve goals | overtired, overstimulated and just one | |
| | little thing is the final thing they need to | |
| | overload their system | |
| When a tantrum is thrown, there is a | When a meltdown occurs, no one is in | |
| definite feel that the child is trying to | control, especially not the person having | |
| control people around them | the meltdown | |

Reasons for Meltdowns

- Communication (don't have the language skills to communicate)
- Sensory problem
- Routine or surroundings have been disturbed
- Can't understand the point of view of someone else (theory of mind)
- Underlying medical issue



Behavioral and developmental features (Hx.)

- Developmental regression
- **❖** Absence of proto-declarative pointing
- * Abnormal reactions to environmental stimuli
- Absence of symbolic play
- * Abnormal social interactions
- Repetitive and stereotyped behavior

Physical Examination

- Pretend play
- Gaze monitoring
- Proto-declarative pointing
- Body movement

- Head and hand features
- Self-injurious behaviors
- Physical abuse
- Sexual abuse

Developmental regression

- 13% and 48%
- 15-30 months
- lose verbal and nonverbal communication skills
- may be precipitated by environmental event (immune or toxic exposures)
- more likely it is <u>coincidental</u> with other environmental events

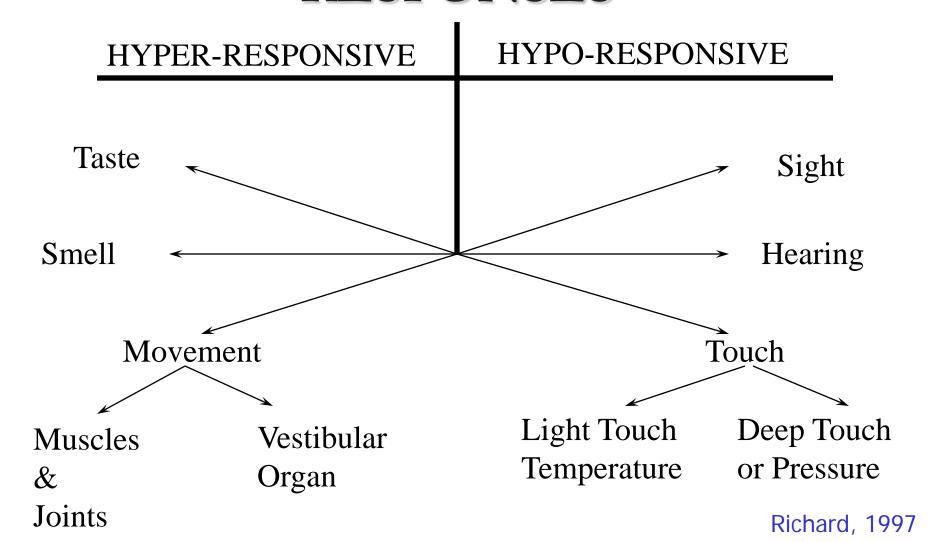
Proto-declarative pointing

- Proto-declarative pointing is the use of the index finger to indicate an item of interest to another person.
- Screening questions include "Does your child ever use his or her index finger to point, to indicate interest in something?"

Environmental stimuli

- More interested in geometric patterns
- Prefer dynamic geometric patterns to participating in physical activities
- Unusual responses to environmental stimuli (excessive reaction / lack of reaction)
 - ✓ Certain sounds (vacuum cleaners or motorcycles) may elicit incessant screaming
 - ✓ Playing a radio, stereo, or television at a loud level may appear to produce hyperacusis
- Exaggerated responses or rage to everyday sensory stimuli, such as bright lights or touching

ABERRANT SENSORY SYSTEM RESPONSES



Play

- o Baron-Cohen and colleagues demonstrated that the absence of symbolic play in infants and toddlers is *highly predictive of a later diagnosis of autism*
- o screening for the presence of symbolic play is a <u>key component of the</u> routine assessment

Odd play

- Interest in <u>parts of objects</u> instead of functional uses of the whole object (repeatedly spinning a wheel of a car, lining up objects or dropping objects from a particular height)
- May be fascinated with items that are <u>not typical toys</u> (pieces of string/paper)
- May spend hours watching traffic lights, fans, and running water

Social interactions

- Lack of appropriate interaction with *family members*.
- Problems *making friends* and understanding *the social intentions* of other children
- Show <u>attachments to objects</u> not normally considered child oriented
- May exhibit inappropriate friendliness
- and lack of awareness of personal space

High pain threshold

- Rather than crying and running to a parent \rightarrow no change in behavior
- Parents often report that they need to ask the child if something is wrong when the child's mood changes, and may need to examine the child's body to detect injury

Language

- o Pronominal reversals
- o Repeating words and sentences
- o Language only the child understands

Response to febrile illnesses

- *During a febrile illness, children with autistic disorder may show a decrease in behavioral abnormalities that plague the parents when the child is well (self-injurious behaviors, aggression toward others, property destruction, temper tantrums, hyperactivity).
- This inhibition of negative behaviors may occur with various febrile illnesses, including ear infections, upper respiratory tract infections, and childhood illnesses. (A parent may say, "When he is suddenly an angel, I know that he has an ear infection.")

Physical Examination

Abnormalities in

- ✓ Pretend play
- ✓ Gaze monitoring
- ✓ Proto-declarative pointing

Pretend play

- ✓ The presence of symbolic play
- ✓ The child should respond appropriately to a pretend activity compared with most other children of the same culture

Gaze monitoring

- The clinician calls the child's name, points to a toy on the other side of the room, and says, "oh look! There's a [name a toy]!"
- If the child looks across the room to see the item indicated by the clinician, then a joint attention is established, indicating normal gaze monitoring

Proto-declarative pointing

□ Assess for the presence of proto-declarative pointing:

Say to the child, "where's the light?" Or "show me the light"

□ A normal response is for the child to point with his or her index finger at the light while looking up at the clinician's face

Body movement

- Clumsiness, awkward walk, and abnormal motor movements are characteristic features of autistic disorder
- Hand flapping
- It may occur in combination with movement of the entire body, such as bouncing (jumping up and down) and rotating (constantly spinning around a vertical axis in the midline of the body)
- Motor tics
- Akathisia (no verbalization of a sensation of inner restlessness and an urge to move)

Head and hand features

- Aberrant **palmar creases** and other dermatoglyphic anomalies are more common
- The **head circumference** of children with autism may be small at birth
 - ✓ many children with autism experience a rapid increase in the rate of growth from age 6 months to 2 years (approximately one fifth of the population of children)
 - ✓ Increased head circumference is more common in boys and is associated with poor adaptive behavior
 - ✓ The head circumference may return to normal in adolescence

Self-injurious behaviors

- Picking at the skin
- Self-biting
- Head punching and slapping
- Head-to-object and body-to-object banging
- Body punching and slapping
- Poking the eye, the anus, and other body parts
- Lip chewing
- Removal of hair and nails
- Teeth banging

Physical abuse

- Persist incessantly with repetitive behaviors that annoy others ...
- Parents, teachers, and others may eventually lose control and inflict physical injury on the child ...

Sexual abuse

- Physically normal in appearance, without dysmorphic features
- Lack ability to communicate inappropriate sexual contact to responsible authorities ...

