# Features of AUTISM

## CORE Features

<table>
<thead>
<tr>
<th>Impaired Social-Emotional Competence</th>
<th>Restricted/Repetitive Behaviors (RRBs)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>I. Non-verbal communication</strong>&lt;br&gt;- Eye contact (joint-attention)</td>
<td><strong>I. Cognitive Rigidity</strong>&lt;br&gt;- Routines / rituals&lt;br&gt;(rule-bound/transitional difficulties/lack spontaneity)</td>
</tr>
<tr>
<td></td>
<td><strong>II. Repetitive patterns</strong>&lt;br&gt;- Speech (Delayed echolalia, Scripting)&lt;br&gt;- Motor mannerisms (Flapping, Clapping, Rocking, Swaying)&lt;br&gt;- Interests</td>
</tr>
<tr>
<td><strong>II. Social-emotional reciprocity</strong>&lt;br&gt;- Empathy&lt;br&gt;- Sharing (activities, affect, conversations)&lt;br&gt;- Social flexibility&lt;br&gt;- Contextual understanding</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>III. Atypical Salience</strong>&lt;br&gt;- Idiosyncratic (odd) Interests</td>
</tr>
<tr>
<td><strong>III. Social-emotional Salience</strong>&lt;br&gt;- Relevant social-emotional stimulus</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>IV. Sensory Dysregulation</strong>&lt;br&gt;- Atypical sensory perceptions/responses&lt;br&gt;- Introsceptive ability</td>
</tr>
<tr>
<td><strong>IV. Abstracting ability</strong>&lt;br&gt;- Black &amp; white/concrete/literal thinking&lt;br&gt;- Tolerance for unstructured time, ambiguity</td>
<td></td>
</tr>
<tr>
<td><strong>V. Introspective/Introceptive ability</strong>&lt;br&gt;(self awareness of cognitions, emotions, &amp; physiological state)&lt;br&gt;- Psychological mindedness</td>
<td></td>
</tr>
<tr>
<td><strong>VI. Executive Functions</strong>&lt;br&gt;(Control/moderation of emotions, motivations, interests)&lt;br&gt;- All or none approach&lt;br&gt;- Abnormal intensity of interests</td>
<td></td>
</tr>
</tbody>
</table>

## ASSOCIATED Features

- Poor motor coordination
- Novelty averse behaviors
- Atypical fear response
- Self-injurious behaviors
DSM Criteria for Autism

Schizophrenic reaction - Childhood Type

- Psychotic reaction
  - DSM-I (1952)

Schizophrenia - Childhood Type

- Autistic, Atypical, &
  - DSM-II (1968)

Infantile Autism

- Infantile Autism
  - DSM-III (1980)

Pervasive Developmental Disorders

- Autistic
  - DSM-III-R (1987)

- PDD-NOS

Pervasive Developmental Disorders

- Autistic

- Asperger's Disorder

- PDD-NOS

Autism Spectrum Disorder

- Autism Spectrum
  - DSM-5 (2013)
DSM-5 Diagnostic Criteria for Autism

**AUTISM SPECTRUM DISORDER (299.00)**

**A Persistent deficits in social interaction and communication**
as manifested by lifetime history of all three of the following:

**I Deficits in social-emotional reciprocity**
- Inability to initiate or respond to social interactions
- Inability to share affect, emotions, or interests
- Difficulty in initiating or in sustaining a conversation

**II Deficits in nonverbal communicative behaviors used for social interaction**
- Abnormal to total lack of understanding and use of eye contact, affect, body language, and gestures
- Poorly integrated verbal and nonverbal communication

**III Deficits in developing, maintaining, and understanding relationships**
- Difficulty in adjusting behavior to social contexts
- Difficulty in making friends
- Lack of interest in peers

**B Restricted, repetitive, and stereotyped patterns of behavior, interests, or activities**
as manifested by lifetime history of at least two of the following:

**I Stereotyped or repetitive speech, motor movements, or use of objects**
- Motor stereotypes or mannerisms (lining up toys)
- Echolalia, stereotyped, or idiosyncratic speech

**II Excessive adherence to sameness, routines, or ritualized patterns of verbal or nonverbal behavior**
- Transitional difficulties
- Greeting rituals
- Rigid patterns of thinking

**III Highly restricted, fixated interests that are abnormal in intensity or focus**
- Preoccupation with excessively circumscribed or perseverative interests

**IV Hyper- or hypo-reactivity to sensory input or unusual interest in sensory aspects of environment**
- Sensory integration issues
- Apparent indifference to pain/temperature
- Excessive smelling, touching, or visual fascination with lights or movements

**C Symptoms must be present in the early developmental period**
Symptoms may not fully manifest until social demands exceed limited capacities, or may be masked by learned strategies in later life.

**D Symptoms cause clinically significant impairment in functioning**

**E These disturbances are not better explained by intellectual disability**
To make comorbid diagnoses of ASD & ID, social communication should be below that expected for general developmental level.

**Specify if:**
- With or without accompanying intellectual impairment
- With or without accompanying language impairment
- Associated with a known medical or genetic condition or environmental factor
- Associated with another neurodevelopmental, mental, or behavioral disorder
- With catatonia

Clinical and Research Program in Pediatric Psychopharmacology
Prevalence of Autism Spectrum Disorder

Children with ASD

ADDMD Network
- Children 8 years old
- Medical records reviewed by trained clinicians

Prevalence of ASD has more than DOUBLED between 2002 & 2010 and is increasing at the rate of 10 - 17% / year

Prevalence of ASD

Substantial rise in the prevalence of AUTISM in intellectually capable populations

Intelligence Profile in AUTISM

**Intellectual Disability [ID]**

- **Impaired IQ**
- **Low-Functioning**
- **Non-verbal**
- **Asocial**

**Autism Spectrum Disorder With ID [Low-Functioning]**

- **Impaired IQ**
- **High-Functioning**
- **Verbal**
- **Socially curious**

Clinical and Research Program in Pediatric Psychopharmacology
Social-emotion Competence Across the Lifespan

**Areas of Social-emotional Development**
- Non-verbal communication skills
- Social skills
- Empathy
- Abstracting ability
- Cognitive Flexibility
- Executive Control
- Introspective ability

**Development of Social Competence (%)**

**Areas of Social-emotional Development**
- Non-verbal communication skills
- Social skills
- Empathy
- Abstracting ability
- Cognitive Flexibility
- Executive Control
- Introspective ability

**Social phase**
- Minimal social-emotion demands
- ± Superior intellectual capacity
- Sensory Dysregulation

**Professional Phase**
- Socially isolated
- Bullied
- Impaired intellectual functioning
- Present with ADHD

**Teenage (13–18 years)**
- Social difficulties (friends, prom, dating)
- Impaired intellectual performance
- At risk for depression, anxiety, psychosis

**Young Adult (19–35 years)**
- ± Intellectual success
- Challenges:
  - Social & relationship
  - Transition to adulthood
- At risk for drug abuse

**Adult (≥36 years)**
- Delayed social milestones (marriage, children)
- Social-emotional isolation
- Suffer from anxiety & mood dysregulation