

Screen & Assess Intellectual Disabilities (ID) & Developmental Disorders (DD)

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Intellectual Disability (ID)

Intellectual Developmental Disorders (IDD)

- Significant limitations in:
 1. Intellectual functioning
 2. Adaptive behavior
- Onset before age of 18

- DSM-V: Intellectual Disability (ID)
- ICD-11: Intellectual Developmental Disorders (IDD)

- Previously called “*mental retardation*”
 - 2010: Federal legislation
 - 2013: DSM-V

Developmental Delay (DD)

- Onset < 22 years old
- Limitations in developmental milestones:
 - Self-care
 - Receptive & expressive language
 - Learning
 - Mobility
 - Self-direction
 - Capacity for independent learning
 - Economic self-sufficiency
- Common temporary diagnosis in young children at risk for ID



What is
Intellectual
Disability?

INTELLECTUAL DISABILITY (ID)

Signs & Symptoms

Delays in:

- Language
 - Motor
 - Social
 - Cause & effect thinking
 - Problem solving
 - Independence
-
- Across settings (home, school, work, & community)

Intellectual Disability (ID)

Intellectual Functioning

- General mental capacity
 - Learning
 - Reasoning
 - Problem solving
 - Planning
 - Abstract thinking
 - Academic learning
- Measure intellectual functioning with IQ test
 - IQ test score < 70

Adaptive Behavior

1. Communication/Conceptual
2. Daily Living Skills/Practical
3. Socialization
 - Personal care
 - Communication & social skills
 - School or work skills
 - Learning routines
 - Being safe
 - Asking for help
 - Using money

Severity Levels of ID ^{*(DSM-IV-TR)}

- Borderline Intellectual Functioning (IQ \geq 70)
- Mild (IQ = 50-69)
- Moderate (IQ = 36-49)
- Severe (IQ = 20-35)
- Profound (IQ < 20)
- DSM-V uses Adaptive Functioning
 - Conceptual, Social, Practical

Comorbid Conditions & Disorders

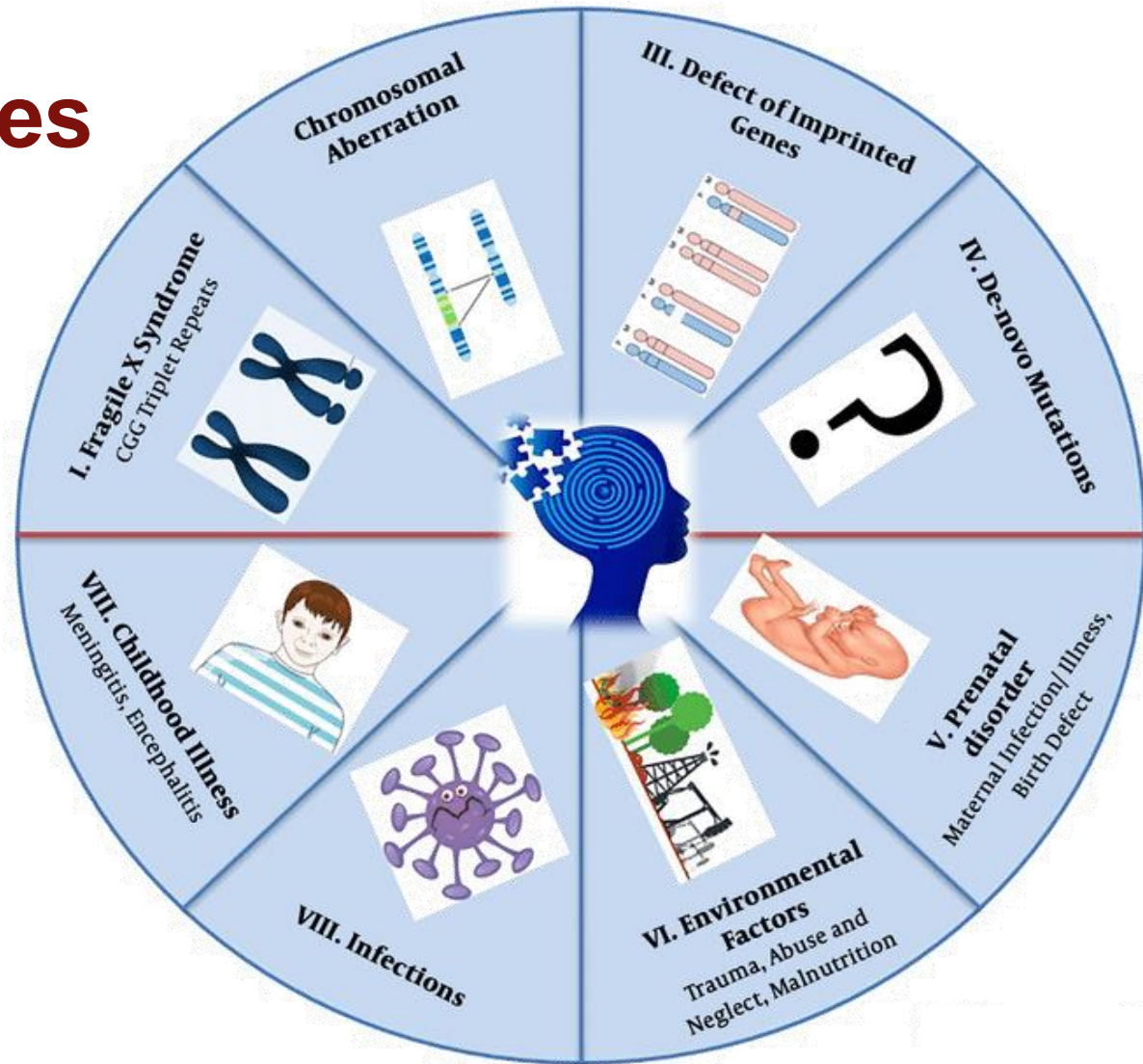
Medical Diagnoses

- ASD
- Cerebral Palsy
- Down Syndrome
- Fetal Alcohol Syndrome
- Fragile X syndrome
- Epilepsy

Psychiatric Diagnoses

- Attention-deficit/hyperactivity disorder (ADHD)
- Impulse-control disorder
- Anxiety disorder
- Major depressive disorder
- Bipolar disorder

Causes

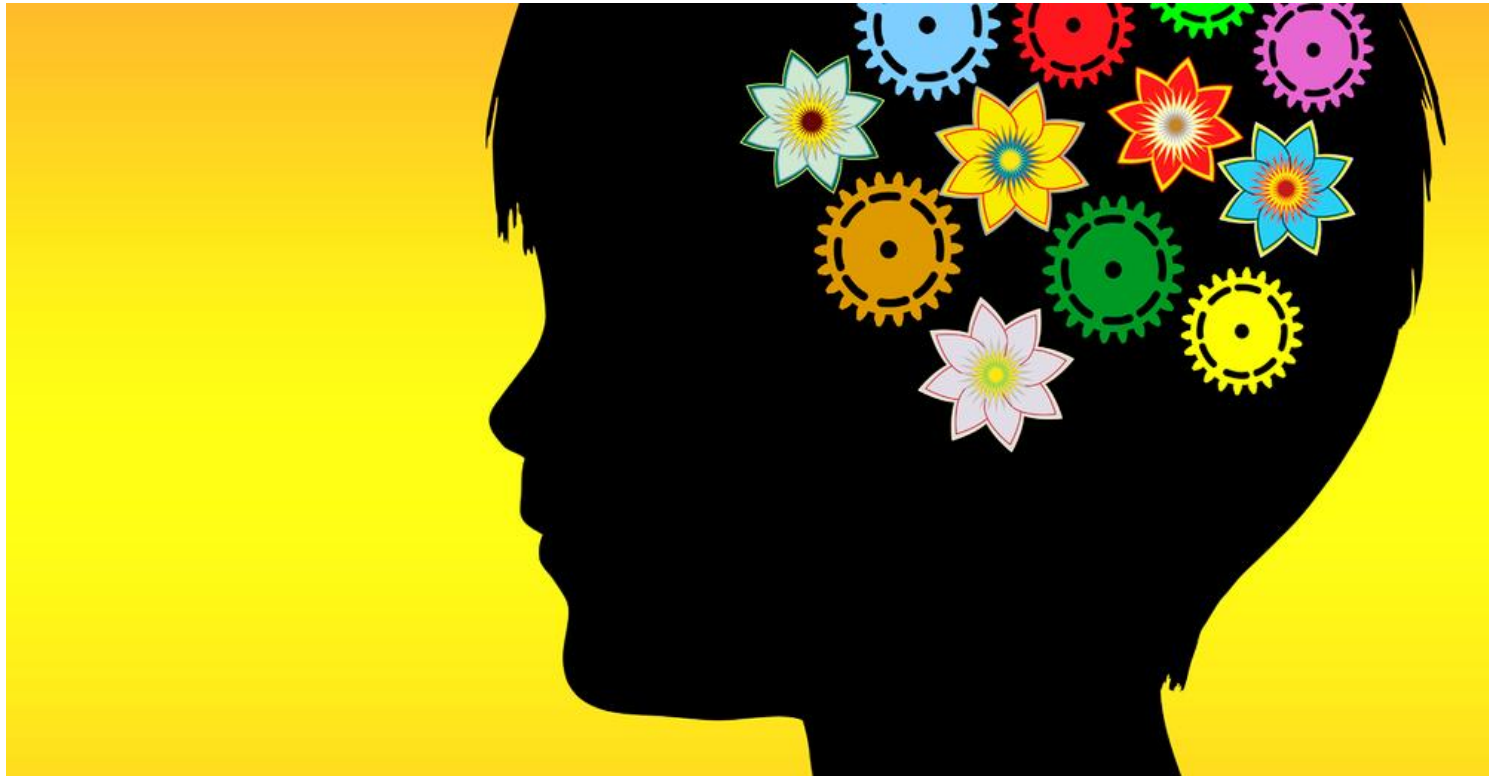


Causes

- **Prenatal**
 - Genetic syndromes (i.e., Down syndrome, Fragile X syndrome)
 - Brain malformation (i.e., Microcephaly)
 - Maternal complications (i.e., Placental disease, malnutrition)
 - Environmental influences (i.e., alcohol, other drugs, toxins, teratogens)
- **Perinatal**
 - Labor and delivery–related events (i.e., neonatal brain damage)
 - Loss of oxygen at birth
- **Postnatal**
 - Traumatic brain injury
 - Infections (i.e., Meningitis, whooping cough, measles)
 - Seizure disorders
 - Toxic metabolic syndromes and intoxications (i.e., lead, mercury)
 - Demyelinating disorders
 - Severe and chronic social deprivation

ID Prevalence

- 1.04% prevalence across life span
 - Ranges from .05 to 1.55%
- Childhood female-to-male ratio with ID:
0.4 and 1.0



ID/DD SCREENING

Developmental Monitoring vs Screening

Developmental Monitoring

- **Who:** Parents & guardians
- **What:** Assess developmental milestones
- **When:** Birth - 5 years
- **Why:** Celebrate child's development
 - Talk about child's progress with doctors
 - Learn what to expect
 - Identify concerns early
- **How:** Easy, free checklists

www.cdc.gov/Milestones

Developmental Screening

- **Who:** Healthcare provider, teacher
- **What:** Assess developmental milestones
- **When:** 9, 18, & 24 or 30 months, or whenever there is concern
- **Why:** Determine if child needs formal evaluation & services
- **How:** With a formal, validated screening tool

www.hhs.gov/WatchMeThriveexternal/icon

Screening Measures

Profiles of Individual Measures: Developmental Screeners

- **Ages and Stages Questionnaire**—3rd Edition
- Ages and Stages Questionnaire—Social-Emotional
- Brigance Screens
- Developmental Assessment of Young Children – Second Edition
- Early Screening Profiles
- FirstSTEP Screening Test for Evaluating Preschoolers
- Learning Accomplishment Profile—Diagnostic Screens
- Parents' Evaluation of Developmental Status
- Parents' Evaluation of Developmental Status—Developmental Milestones

Profiles of Individual Measures: Abbreviated Profiles

- Infant Development Inventory
- Survey of Well-Being of Young Children



REFERRAL FOR ASSESSMENT

Differential Diagnoses

- Developmental Delay
- Attention-Deficit/Hyperactivity Disorder (ADHD)
- Learning Disorder
- Autism Spectrum Disorder

Differential between ID & ASD

Commonalities

- Developmental period onset
- Deficits in nonverbal & verbal communication
- Social limitations
- Executive function delays
- Poor academic performance

Differences

- Individuals with ASD have range of IQs
- Individuals with ID usually develop skills slower than peers; those with ASD may not follow the typical developmental progression
 - Kids with ID can play well with younger kids
- Individuals with ASD have difficulty with theory of mind (i.e., understanding perspective of others)

Comprehensive Assessment

- Case history
 - Medical, educational, & vocational
 - Teacher, caregiver, & patient
- Review of auditory, visual, motor, and cognitive status

- Assessment of
 - Nonsymbolic (i.e., gestures) & symbolic communication (i.e., words)
 - Play
 - Social interactions & communications
 - Spoken language (expressive & receptive)
 - Written language (reading & writing)
 - Speech
 - Oral motor skills (swallowing)
 - Fluency

Psychological Assessment (IQ)

Cognitive

- Wechsler Intelligence Scale for Children (WISC-V) [6-16:11]
- Wechsler Preschool & Primary Scale of Intelligence (WPPSI-IV) [2:6-7:7]
- Stanford Binet (SB-5) [2-85]
- Mullen Scales of Early Learning (Mullen) [<5:8]
- Differential Abilities Scale (DAS 3) [2:6-17:11]
- Woodcock Johnson Tests of Cognitive Abilities (WJ-IV Cog)

Adaptive

- Vineland Adaptive Behavior Scale-3
- Adaptive Behavior Assessment System (ABAS 3)



TREATMENT

Possible Recommendations

- Interventions & support
- Communication system/device
- Referral to other professionals (e.g., PCP, SLP, PT, OT, psychologist)
- Community supports
- Transitional supports (e.g., early intervention into school age; school age into workplace).

Early Intervention Services

- Early intervention services help children 0-3
- IEP: Children 3+ with identified developmental delay
- Child Find programs: state provided to evaluate & identify children in need of IEPs
- Individuals with Disabilities Education Act (IDEA): children with diagnosed disability's right to special education services

Behavioral Interventions

- **Applied Behavior Analysis (ABA)**
 - Individualized treatment builds skillsets (e.g., communication, social skills, self-control, and self-monitoring)
- **Environmental arrangement**
 - Increase interest in environment & create communication situations communication
- **Functional communication training (FCT)**
 - Extinction & replacement behaviors (more appropriate communication)
- **Incidental teaching**
 - Reinforce attempts to communicate by prompting with a question (e.g., “What do you want?”) or model a request (e.g., Say, “I need paint”).
- **Milieu therapy**
 - Integrate into a child’s natural environment

Question & Answer

RESOURCES

Referenced Resources

- [ASHA: Intellectual Disability](#)
- [AAIDD: Intellectual Disability](#)
- [Child Find: Programs](#)
- [Parent Center Hub](#)
- [Screening Compendium](#)
- [Screening Time](#)
- [CDC Child Development](#)

- [Brault, M. W. \(2012\). Americans with disabilities: 2010 \(pp. 1-23\). Washington, DC: US Department of Commerce, Economics and Statistics Administration, US Census Bureau.](#)
- [Maulik, P. K., Mascarenhas, M. N., Mathers, C. D., Dua, T., & Saxena, S. \(2011\). Prevalence of intellectual disability: a meta-analysis of population-based studies. Research in developmental disabilities, 32\(2\), 419-436.](#)
- [Maulik, P. K., Mascarenhas, M. N., Mathers, C. D., Dua, T., & Saxena, S. \(2013\). "Prevalence of intellectual disability: A meta-analysis of population-based studies": Corrigendum.](#)
- [McKenzie, K., Milton, M., Smith, G., & Ouellette-Kuntz, H. \(2016\). Systematic review of the prevalence and incidence of intellectual disabilities: current trends and issues. Current Developmental Disorders Reports, 3\(2\), 104-115.](#)
- [Yirmiya, N., Erel, O., Shaked, M., & Solomonica-Levi, D. \(1998\). Meta-analyses comparing theory of mind abilities of individuals with autism, individuals with mental retardation, and normally developing individuals. Psychological bulletin, 124\(3\), 283.](#)

ASHA Resources

- [Augmentative and Alternative Communication \(AAC\)](#)
- [Autism Spectrum Disorder](#)
- [Changes in Services for Persons With Developmental Disabilities: Federal Laws and Philosophical Perspectives](#)
- [Childhood Apraxia of Speech](#)
- [Childhood Fluency Disorders](#)
- [Collaboration and Teaming](#)
- [Communication Characteristics: Selected Populations With an Intellectual Disability](#)
- [Federal Programs Supporting Research and Training in Intellectual Disability](#)
- [Hearing Loss: Beyond Early Childhood](#)
- [Late Language Emergence](#)
- [Literacy in Individuals With Severe Hearing Loss](#)
- [Newborn Hearing Screening](#)
- [Pediatric Dysphagia](#)
- [Permanent Childhood Hearing Loss](#)
- [Social Communication Disorder](#)
- [Speech Sound Disorders: Articulation and Phonology](#)
- [Spoken Language Disorders](#)
- [Treatment Principles for Individuals With an Intellectual Disability](#)

Other Resources

- [American Association on Intellectual and Developmental Disabilities \(AAIDD\)](#)
- [American Occupational Therapy Association](#)
- [American Physical Therapy Association](#)
- [Association of Assistive Technology Act Programs](#)
- [Autism Speaks](#)
- [Centers for Disease Control and Prevention \(CDC\): Developmental Disabilities](#)
- [Council for Exceptional Children/Division for Communicative Disabilities and Deafness](#)
- [Easter Seals](#)
- [International Society for Augmentative and Alternative Communication](#)
- [National Down Syndrome Society](#)
- [National Fragile X Foundation](#)
- [FRAXA Research Foundation](#)
- [National Joint Committee for the Communication Needs of Persons With Severe Disabilities](#)
- [National Organization on Fetal Alcohol Syndrome](#)
- [RESNA: Rehabilitation Engineering and Assistive Technology Society of North America](#)
- [TASH: The Association for Persons with Severe Handicaps](#)
- [The Arc for People With Intellectual and Developmental Disabilities](#)
- [UCP: United Cerebral Palsy](#)
- [United States Society for Augmentative and Alternative Communication](#)