

## **Intellectual and Developmental Disorder (IDD)**

### **Definition**

Intellectual and developmental disabilities (IDDs) are disorders that are usually present at birth and that negatively affect the individual's physical, intellectual, or emotional development. Many of these conditions affect multiple body parts or systems. Intellectual disability starts any time before a child turns 18 and is characterized by problems with both:

1. Intellectual functioning or intelligence, which include the ability to learn, reason, problem solve, and other skills; and
2. Adaptive behavior, which includes everyday social and life skills.

The term "developmental disabilities" is a broader category of often lifelong disability that can be intellectual, physical, or both. "IDD" is the term often used to describe situations in which intellectual disability and other disabilities are present.

### **Causes:**

- Genetic syndromes (e.g., Down syndrome and Fragile X syndrome)
- Inborn errors of metabolism (*chemical processes in body*)
- Brain malformation (*defect*)
- Maternal disease (*from mother's side*)
- Environmental influences (e.g., alcohol, other drugs, toxins)
- Labor and delivery related events
- Anoxia (*less oxygen*) at birth
- Traumatic brain injury
- Infections
- Demyelinating disorders (*any disease of nervous system, problem in sending and receiving signals*)
- Seizure disorders (*uncontrolled electrical brain activity*)
- Severe and chronic (*for a very long time*) social deprivation
- Toxic metabolic syndromes and intoxications (e.g., lead, mercury)

### **What are the signs of intellectual disability in children?**

There are many different signs of intellectual disability in children. Signs may appear during infancy, or they may not be noticeable until a child reaches school age. It often depends on the severity of the disability. Some of the most common signs of intellectual disability are:

1. Rolling over, sitting up, crawling, or walking late
2. Talking late or having trouble with talking
3. Slow to master things like potty training, dressing, and feeding himself or herself
4. Difficulty remembering things
5. Inability to connect actions with consequences
6. Behavior problems such as explosive tantrums
7. Difficulty with problem-solving or logical thinking

### **Characteristics of IDD Individuals:**

#### **Lack in Intellectual Functions**

- Language development
- Reasoning
- Problem solving
- Planning
- Abstract thinking
- Judgment
- Academic learning
- Learning from experience

#### **Lack in Adaptive Functioning**

- Less personal independence
- Less social participation and responsibility
- Difficulty in communication

#### **Lack in Concept Development**

- Slow language development (children learn to talk later, if at all)
- Slow development of pre-academic skills
- Difficulties in academic learning (reading, writing, mathematics)
- Difficulty understanding concepts of time and money
- Problems with abstract thinking (concrete approach to problem solving)
- Difficulties in executive function (i.e., planning, strategizing, priority setting)
- Problems with short-term memory
- Difficulties with use of academic skills such as money management and time management

#### **Lack in Practical Work**

- Requiring different levels of support for daily life activities such as
  - Personal care

- Complex tasks (e.g., shopping, transportation, care organization, meals, money management)
- Employment
- Health care and legal decisions
- Household tasks
- Recreational skills

### **Assessment:**

1. Screening
2. Comprehensive Assessment

Screening for hearing, speech, language, communication, and swallowing problems. Screening determines the need for further assessment or referral for other services. Screening may not be a needed step for individuals with IDD, particularly those with more severe limitations in intellectual or adaptive functioning. For these individuals, a comprehensive assessment is likely to be the first step.

Screening typically includes

- gathering information from parents, teachers, and co-workers regarding concerns about an individual language(s) and skills in each language;
- conducting a hearing screening to rule out hearing loss as a possible contributing factor to language difficulties;
- observing speech production, language comprehension and production, social communication, and literacy skills in natural environments
- Conducting a screening of swallowing/eating function

Screening may result in recommendations for

- complete audiology (*hearing*) assessment
- complete language assessment
- complete speech sound assessment, if the speech sound system is not appropriate for the individuals age or language community
- complete literacy assessment
- Referral for other assessments or services

The comprehensive assessment may include the following, depending on the age and functioning of an individual with IDD and his or her needs:

- Case history including medical, educational, and vocational status as well as teacher, guardian, employer, and client/patient point of views on the problem
- Interview with family members about communication during daily routines
- Review of auditory, visual, motor, and intelligence status, including hearing screening
- Assessment of
  - non symbolic (e.g., gestures, problem behaviors) and symbolic (e.g., words, signs, pictures) communication
  - play
  - social interaction and social communication
  - spoken language (listening and speaking)
  - written language (reading and writing)
  - speech production
  - oral motor skills
  - swallowing/eating
  - fluency

Assessment may result in

- diagnosis of a communication disorder or delay which comes after IDD
- description of the characteristics and severity of the communication disorder or delay
- identification of possible hearing problems
- recommendations for intervention (actions taken/group discussions to improve a medical disorder) and support
- recommendation of a communication system (e.g. speech-generating devices)
- referral to other professionals as needed (e.g., physician, physical therapist, occupational therapist, psychologist, or counselor)
- recommendations for support for parents, guardians, teachers, and employers
- Recommendations for support for transitions (e.g., early intervention into school age; school age into work place)

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