INTELLECTUAL DISABILITY AND ASD

Individuals with Intellectual Disability (formerly referred to as “Mental Retardation”) have deficits in intellectual and adaptive functioning, which are observed during development (generally, before the age of 18). Intellectual functioning includes the ability to reason, problem solve, plan, think abstractly, exercise judgment, and learn. Adaptive functioning refers to the skills needed to live in an independent and responsible manner, including communication, social skills, and self-help skills (for example, getting dressed, feeding, money management, and shopping).

While Intellectual Disability used to be diagnosed solely by administration of an Intelligence Quotient (IQ) test, current guidelines (DSM-5) emphasize the need to use both clinical assessment and standardized testing. Nonetheless, IQ scores are still used as a general guideline, with a score equal or below 70 indicating Intellectual Disability.

About 1 percent of the general population is thought to have Intellectual Disability, and about 10% of individuals with Intellectual Disability have Autism Spectrum Disorder (ASD) or autistic traits. However, a much higher percentage of individuals with ASD have Intellectual Disability.

As of the most recent prevalence study conducted by the Centers for Disease Control (CDC), which studied records from 2008, 38% of children with ASD had Intellectual Disability. (24% of children with ASD were considered in the borderline range in terms of intellectual ability – an IQ of 71–85; 38% had IQ scores over 85, considered average or above average.) A higher proportion of females with ASD had Intellectual Disability compared with males: 46% of females with ASD had intellectual disability, compared with 37% of males. (Note, ASD is almost five times more prevalent in males than females.) Since the CDC has been measuring prevalence rates of ASD and co-occurring Intellectual Disability, the rate of individuals with ASD who do not have co-occurring Intellectual Disability has been
rising faster than the rate of individuals with ASD and Intellectual Disability. Additionally, in the CDC’s most recent report, ASD prevalence was typically higher in states which had a greater percentage of children with IQs above 70 (New Jersey, in particular).

Scientists are still trying to determine if there is a common genetic link between Intellectual Disability and ASD. Certain genetic syndromes (Fragile X, Rett, Tuberous Sclerosis, Down, phenylketonuria, CHARGE, and Angelman) are associated with severe Intellectual Disability and also have a high incidence of ASD. However, other research has shown that Intellectual Disability is associated with a high number of deletions within an individual’s genetic code, whereas ASD is associated instead with a high number of duplications. Regardless of the possibility of a causal connection, it is recognized that individuals with ASD and those with Intellectual Disability share common struggles, particularly with respect to social and communication skills, which are necessary components of the ASD diagnosis.

Identifying an Intellectual Disability in a child with diagnosed ASD is critical for developing an Individualized Education Program (IEP) to best support learning needs and independence skills. For example, children with Intellectual Disability may require more repetition, including pre-teaching and re-teaching of skills, compared to other children their age. Their options for employment after high school will look different from those of children who learn more easily.

If your child is struggling to learn and/or retain new skills and information, you may want to consider having your child evaluated for Intellectual Disability. This is typically done by a clinical psychologist or a school psychologist. An evaluation for Intellectual Disability includes an assessment of your child’s cognitive (IQ) skills, which is done through the administration of a standardized test, and an assessment of your child’s adaptive behavior (age-appropriate independence) skills, which is usually done by interviewing the parent and/or teacher(s). Information gathered from this assessment will help with the educational planning and development of appropriate IEP goals.

Related Articles:

- ASD and Other Genetic Conditions
- Autism Prevalence
Co-Occurring Conditions or Co-morbidities
Diagnostic Criteria for Autism Spectrum Disorder in the DSM-5

Additional Resources:

- Prevalence of Autism Spectrum Disorders, from the CDC
- Intellectual Disability Fact Sheet, from the CDC
- Intellectual Disability Fact Sheet, from the American Psychiatric Association

The Center for Autism Research and The Children's Hospital of Philadelphia do not endorse or recommend any specific person or organization or form of treatment. The information included within the CAR Autism Roadmap and CAR Resource Directory should not be considered medical advice and should serve only as a guide to resources publicly and privately available. Choosing a treatment, course of action, and/or a resource is a personal decision, which should take into account each individual's and family's particular circumstances.