

A STEP-BY-STEP GUIDE FOR EDUCATORS

Teaching Students With Autism Spectrum Disorders

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Introduction to ASD

IDEA Definition of ASD

Under our nation's federal special education law, the Individuals with Disabilities Education Act 2004 (IDEA, 2004), all types of ASD are classified under one term, *autism*.

Under IDEA 2004, *autism* is defined as

a developmental disability significantly affecting verbal and nonverbal communication and social interaction, usually evident before age 3, that adversely affects a child's educational performance. Other characteristics often associated with ASD are engagement in repetitive activities and stereotyped movements, resistance to environmental change or change in daily routines, and unusual responses to sensory experiences. The term does not apply if a child's educational performance is adversely affected because the child has an emotional disturbance. (300.8[c][1])

Important Point: Most practitioners and educators believe autism is a "spectrum" disorder; that is, a group of disorders with similar features, which can range from mild to severe. Throughout this book, we will refer to "autism" as "autism spectrum disorder" (ASD).

Overview of ASD

Originally described in 1943 by Leo Kanner (Colarusso & O'Rourke, 2004), ASD is an increasingly popular term that refers to a broad definition of ASD, including the classical form of the disorder as well as closely related disabilities that share many of the core characteristics.

ASD has many variations in symptoms or behavioral characteristics. Furthermore, people with ASD vary widely in abilities, intelligence, and behaviors across those indicators. That is, some or all of the characteristics associated with ASD may be observed in a range of mild to very severe forms. For example, some children do not speak; others have limited language. Those with more advanced language skills tend to use a small range of topics, as well as have difficulty with abstract concepts and pragmatic language skills. Repetitive play skills, a limited range of interests, and impaired social skills are generally evident as well. Unusual responses to sensory information, such as loud noises, lights, and certain textures or food or fabrics, are also common.

Individuals with ASD can exhibit severe mental retardation or be extremely gifted in their intellectual and academic accomplishments (Vaughn, Bos, & Schumm, 2003). While many individuals prefer isolation and tend to withdraw from social contact, others show high levels of affection and enjoyment in social situations. Some people with ASD appear lethargic and slow to respond, focusing more on objects than on other people (Scott, Clark, & Brady, 2000). Others are very active and seem to interact constantly with preferred aspects of their environment.

Causes of ASD

ASD is a neurological disability that is presumed to be present from birth and is always apparent before the age of three. Most researchers agree that the collection of symptoms constituting ASD arises from a set of inherited factors (Rodier, 2000). Although ASD affects the functioning of the brain, the specific cause of ASD is unknown. In fact, it is widely assumed that there are most likely multiple causes, each of which may be manifested in different forms, or subtypes, of ASD.

In the majority of cases, no specific underlying cause can be identified. However, a variety of factors are being investigated. These include infectious, metabolic, genetic, and environmental factors. Professionals generally agree that symptoms of ASD are triggered by

malfunctions in the brain (Szatmari, Jones, Zwaigenbaum, & MacLean, 1998) and that trauma related to abuse or neglect by caregivers is not the cause (Gillberg & Coleman, 2000).

The search for physiological causes of ASD began in the 1960s (Scott et al., 2000). A working group convened by the National Institute of Health (NIH) in 1995 reached a consensus that ASD probably results from a genetic susceptibility that involves multiple genes. However, the research on chromosomal abnormalities in ASD shows no agreement as to what chromosome or chromosomes are implicated as a cause of ASD (International Molecular Genetics Study of Autism Consortium (IMGSAC), 1998; Konstantareas & Homatidis, 1999).

Some parents and families of children with ASD believe that the measles/mumps/rubella (MMR) vaccine caused their children's ASD. These parents report that their children were "normal" until they received the MMR vaccine. Then, after getting the vaccine, their children started showing symptoms of ASD. Because the symptoms of ASD began to occur around the same time as the child's MMR vaccination, parents and families see the vaccine as the cause of the ASD. However, just because the events happen around the same time does not mean that one caused the other. Although children receive many other vaccines in addition to the MMR vaccine, these other vaccines have not been identified as possible causes of ASD.

These parents' beliefs and observations were reinforced by a small study of bowel disease and ASD published by Wakefield and his colleagues in 1998 (Wakefield et al., 1998). The study's authors suggested that there was a link between the MMR vaccine and ASD. This study did not involve scientific testing to find out if there was a link. Rather, the authors relied on the reports of parents and families of 12 children with ASD to make their suggestion. The study did not provide scientific proof of any link.

Since this study was published in 1998, a number of other studies have been published that suggest a link between the MMR vaccine and ASD, but none provides scientific proof of such a link.

To date, there is no conclusive evidence that any vaccine increases the risk of developing ASD or any other behavior disorder. Currently, no study provides definitive evidence of an association between ASD and vaccines (Dales, Hammer, & Smith, 2001; Stratton, Gable, Shetty, & McCormick, 2001). However, continued research is needed to examine the mechanisms of ASD and any possible relationship to vaccines.