



What is Autism?

by Prof. Bruce Tonge and Dr Avril Brereton

Autism is a syndrome consisting of a set of developmental and behavioural features. The core features of autism include impairments in three main areas of functioning;

1. **social interaction,**
2. **communication,**
3. **restricted, repetitive and stereotyped patterns of behaviour, interests and activities.**

Autism affects the person throughout life.

How does autism affect children?

1. Social interaction

One of the key features of autism is abnormal interpersonal relationships. Children with autism often show a reduced responsiveness to or interest in people, an appearance of aloofness and a limited or impaired ability to relate to others. Children with autism usually show very little variation in facial expression, have abnormal eye contact and tend not to engage in social imitation, such as waving bye-bye and pat-a-cake games. They rarely develop age-appropriate empathy or the ability to understand that other people have feelings. Although children with autism do develop some social relating skills, these skills are usually restricted or abnormal. Their ability to make friends is absent or distorted and they are usually unable to play reciprocally with other children.

2. Communication

Children with autism usually have quite delayed and unusual speech. Approximately 50% of children with autism will eventually have useful speech. Children with autism also have an impaired ability to use gesture.

In those children who do develop language, the tone, pitch and modulation of speech is often odd and the voice may sound mechanical or flat in quality. Some children speak in whispers or too loudly and some speak in an unusual accent. Echolalia, the immediate repetition of what has just been said or the delayed repetition of phrases, is common. Some children

repeat advertising jingles or large pieces of dialogue from videos, perhaps days later, for no apparent reason. Their understanding of spoken language is often literal and they do not understand metaphors such as “shake a leg”.

Some children with autism develop a wide vocabulary and expressive verbal skills, however, even they have difficulty with the pragmatic or social use of language. They have impaired ability to initiate conversation and maintain the “to and fro” of a conversation.

3. Ritualistic and stereotyped interests or behaviours

Ritualistic and compulsive behaviours are common, such as lining up toys and having rigid routines for daily activities. There is often a resistance to change in routine or the environment so that the child may become extremely distressed if a new route is taken to school, furniture in the house is rearranged or the child is asked to wear new clothes.

Hand and finger mannerisms and repetitive body movements, such as hand flapping or tip-toe walking, are common. There is often a fascination with movement of objects, such as spinning wheels. Children may look closely at the fine detail of an object such as the edge of a table or spokes on a wheel, or collect objects such as buttons or twigs. Many children with autism, especially in middle to late childhood, have unusual pre-occupations that they follow to the exclusion of other activities. These may involve a fascination with bus routes or train timetables in association with repeatedly asking questions to which specific answers must be given.

4. Play and imagination

Children with autism usually have rigid and limited play, with a noticeable lack of imagination and creativity. They may repetitively line up toys, sort by colour, or collect various objects such as pieces of string or objects of a certain colour or shape. Intense attachment to these objects can occur with the child showing great distress if these objects are taken away or the patterns are disrupted.

Older children may develop play that superficially appears to be creative, such as re-enacting the day at school with dolls or acting out scenes from favourite videos. Observation of this type of play over time often reveals a highly repetitive scenario that does not change and cannot be interrupted.

Children with autism rarely involve other children in their play, unless they are given a particular role in a situation in which the autistic child is in control and makes the rules.

5. Associated features

Many other abnormalities are associated with autism, such as unusual dietary habits, sleep disturbance, abnormalities of mood and self-injurious behaviour. Perceptual abnormalities such as lack of response to pain, heightened sensitivity to sound and preoccupation with tactile stimulation are also common. These features are not specific to individuals with autism and may occur in other children with intellectual disability.

6. Intellectual ability

The majority of children with autism have intellectual disability. A recent review of the literature found that in most samples approximately 50% of cases exhibit severe intellectual disability, 30% mild to moderate disability and the remaining 20% have IQ's in the normal range.

What causes autism?

The exact causes of Autism are unknown. We do know that it is a biological condition that children are born with. Genetic factors play an important role in the causation of autism, although which genes are involved has not been determined. People with autism probably share certain features of abnormal brain function, but the nature of these remains elusive and controversial.

How common is autism?

Recent international research (Chakrabarti and Fombonne, 2005) now suggests that the best estimate for the prevalence of all autism spectrum disorders is 60 per 10,000 population. A three year study commissioned by the Australian Advisory Board on Autism Spectrum Disorders into the prevalence of autism, concluded that there is a prevalence of 62.5 per 10,000 or one in 160 Australian children aged between 6 and 12 years have an autism spectrum disorder (ASD) (Wray and Williams, 2007).

References

Chakrabarti, S., Fombonne, E. (2005) Pervasive Developmental Disorders in Pre-school aged children. Confirmation of High Prevalence. *A. J. Psychiat.* 162: 1133-1144

Wray, J., Williams, K. (2007) The Prevalence of Autism in Australia. Report commissioned by the Advisory Board on Autism Spectrum Disorders.