



▶ Red Flag alerts to the early signs of autism.

Dr Avril V Brereton

Watch, wait and wonder or watch, wait and worry?

Mum gets a box of toys, sits on the floor with her 8 month old baby and lets him explore the box. She *watches* what he does, *waits* for him to engage her and lead her into his play and *wonders* about what he is learning and thinking. But what about the mother who has a baby who doesn't do those things? When she puts the toy box on the floor, her baby doesn't look in the box, doesn't engage with her or play with the toys. Her baby doesn't seem to be learning and she wonders if and what he is thinking. For this mother, watch, wait and wonder is more likely to be watch, wait and worry. We know that many parents who have a child with an Autism Spectrum Disorder began worrying about their child at a very early age.

What are autism spectrum disorders (ASDs)?

Autism Spectrum Disorders (ASDs) are serious neurodevelopmental disorders affecting up to 1 in 160 Victorians (Wray and Williams, 2007). Over 60 years ago, Dr. Leo Kanner introduced the word "autism", derived from the Greek word 'auto' or 'self', to the scientific community (Kanner, 1943). Kanner, a psychiatrist at Johns Hopkins University, wrote a clinical account of eleven children with "autistic disturbances of affective contact" (Kanner, He described previously unreported and distinctive patterns of symptoms including an inability to relate to people and situations, delayed and disordered language and repetitious behaviours with an obsessive desire for the maintenance of sameness. These three core symptoms have remained central to the diagnosis of autism. In 1980, the American Psychiatric Association's Diagnostic and Statistical Manual (DSM-III) introduced the term Pervasive Developmental Disorders (PDDs) to describe a group of five conditions, including autism, which present in the first years of life and cause impairments in social interaction, communication and unusual behaviours and interests. The current diagnostic manuals, both the Diagnostic Statistical Manual of Mental Disorders, Fourth Edition, Text Revised, of the American Psychiatric Association (DSM-IV-TR) (American Psychiatric Association, 2000) and the International Classification of Diseases and Related Health Problems (ICD-10) (World Health Organisation, 1992) continue to include five categories of PDDs: Autistic Disorder, Asperger's Disorder, Pervasive Developmental Disorder – Not Otherwise Specified, Rett's Disorder and Childhood Disintegrative Disorder.1943). In recent times, there has been a move away from the term PDDs towards the term Autism Spectrum Disorders (ASDs). Lorna Wing introduced this term to refer to a group of conditions which shared a "triad of impairments" (Wing, 1997). Wing and her colleagues had earlier described a continuum of conditions which could be

differentiated by the degree of social impairment with “aloof” children at the severe end, and “active but odd” children, who made spontaneous social approaches mainly for their repetitive and idiosyncratic preoccupations, at the other end (Wing & Gould, 1979). However, the term ASDs has also been used by researchers and clinicians in a variety of other ways, for example, as a description of symptom severity, as a developmental concept and to describe a continuum of intellectual ability (Tonge, 2002). The term ASDs typically refers to a group of conditions including Autistic Disorder, Asperger’s Disorder and PDD-NOS. Although the presenting symptoms change with maturation, they continue to be a major source of distress and difficulty and are a significant burden on carers and cost to the community.

When do parent first notice problems and worry about autism?

There is a growing literature about the early signs of autism and when parents start to worry about their children. Symptoms of autism begin to manifest during the first two years of life and retrospective parent interviews and analysis of home movies have confirmed early developmental differences in infants who went on to have a diagnosis of autism (Chawarska et al., 2007). Howlin & Asgharian, (1999) found that parents of children with autism often reported difficulties or delays in their child’s development before two years of age, yet diagnosis at that stage was often not made until a child was about four years old or older. In that study concerns about language development were the most common concern that made parents worried and seek help. In another study, DeGiacomo & Fombonne, (1998) found that approximately 30% of parents noticed problems prior to the first birthday and 80% by the age of 2-years. More recently, these findings have been supported by Chawarska et al. (2007) who found that parents of children diagnosed with either Autism or PDD-NOS reported, on average, first recognition of developmental problems at about 14-15 months. Difficulties with language development and social relatedness were most common. Chawarska et al. (2007) described early developmental differences including:

- children failing to adopt anticipatory postures such as reaching out to be picked up,
- less visual attention to social stimuli,
- less smiling in response to others,
- less vocalization and
- less object exploration.

Other studies have found that parents were also concerned about an unusual rate of progress in their children such as delays in reaching developmental milestones, an apparent slowing of development such as first words not following babbling, and loss of previously acquired language and social skills (regression). Regression has been reported in various studies in 20-40% of cases (words, vocalization, non-verbal communication skills, social dyadic interaction skills, imitation, pretend play (Kobayashi & Muruta 1998; Tuchman & Rapin, 1997). Another important reported finding is that early differences in joint attention, shared affect, verbal communication and, in some studies, repetitive behaviours, are common in infants and toddlers later diagnosed with autism. Researchers investigating the developmental trajectories of siblings who later develop autism, found that these children manifest risk signs related to communication, social behaviour and perhaps repetitive and stereotyped behaviours as early as 12 -14 months of age.

Current research is now sending clinicians a consistent message: parents recognise developmental concerns and signs of autism in their children *early*. Recently, McConkey et al. (2008) discussed some clinical implications of their finding that mothers recognise early features of autism by 18 months of age. They identified health visitors and child care personnel working with young children as professionals who should:

- Be knowledgeable about the early signs of ASDs
- Be knowledgeable about the importance of early intervention and strategies that can be put in place early to help promote development in children and support for families
- Be knowledgeable about how to discuss developmental concerns and share knowledge with parents

Screening for developmental problems and surveillance of early signs of autism




In 2007, the American Academy of Pediatrics (AAP) published a policy statement and technical report for the identification and evaluation of children with ASD (Johnson and Myers, 2007). Recommendations included routine developmental surveillance at every preventive visit and that all children be screened with a standardized broadband developmental screening tool at 9-, 18-, 24- and 30-month visits, and an ASD-specific screening tool at the 18- and 24-month visits. Wetherby et al., (2008) discussed the critical need for further research to develop and validate screening tools for ASD in very young children and suggested that it may be more accurate to use a broadband screener followed by an ASDs specific screener to detect children with ASD. They subsequently developed the Infant–Toddler Checklist as a broadband screener for autism spectrum disorders in infants and toddlers from 9 to 24 months of age (Wetherby et al., 2008). A more recent Australian study of infants from 8 months, found that surveillance of early signs of autism emerging by 18 months led to diagnosis of an ASD at 24 months (Barbaro & Dissanayake, 2010).


Red flags: Early signs of Autism


Because there is currently no biological marker for ASDs, screening and diagnosis must be based on behavioural features. There is also an acknowledgement that there is a gap between parent's first concerns and the time of diagnosis, which is usually at between 3 and 5 years of age. There is a growing body of research on early red flags of ASDs in the first and second years of life from retrospective parent report and home video analyses and from prospective research on siblings of children with ASDs and on general population samples. In 2000, Fillipek et al., published the paper entitled "Practice Parameter: Screening and Diagnosis of Autism—Report of the Quality Standards Subcommittee of the American Academy of Neurology and the Child Neurology Society". They listed 5 red flags for early signs of autism to assist health professionals such as maternal and child health nurses, GPs and paediatricians to play a key surveillance role in determining which young children might require further screening and referral for an ASD assessment.

The five internationally recognised red flags for autism

The five major internationally recognised red flags for autism are:

-  Does not babble or coo by 12 months of age
-  Does not gesture (point, wave, grasp, etc.) by 12 months of age
-  Does not say single words by 16 months of age

 Does not say two-word phrases on his or her own (rather than just repeating what someone says to him or her) by 24 months of age

 Has **any** loss of **any** language or social skill at **any** age.

If any red flags are identified

The earliest signs of autism (flags 1 to 4) involve the absence of normal behaviours so they can be difficult to identify. You can catch warning signs early if you know what to look for. Any loss of speech, babbling, gestures or social skills should be taken very seriously, as regression is a major red flag for autism. Some children with autism start to develop communication and social skills and then regress, usually between 12 and 24 months. For example, a child who had some single words may either stop using them or not make any progress. Another child may stop being socially interested in others and stop playing social games such as peek-a-boo and waving “bye-bye” (Fillipek, 2000).

****If any of these 5 red flags are identified, immediate referral to the GP with a view to a paediatric assessment and a multi-disciplinary specialist autism assessment is indicated.**

Multidisciplinary Team: This term is used to identify a team whose membership comprises individual professionals from two or more different disciplines (e.g. psychology, speech pathology, medicine, social work, etc). In Victoria, the Multidisciplinary Team providing ASD assessments usually comprises the following three “core” disciplines - Psychology, Paediatrics and/or Psychiatry and Speech Pathology.

References and further reading:

American Psychiatric Association. (2000). *Diagnostic and Statistical Manual of Mental Disorders* (Text revision). Washington, DC: American Psychiatric Association Press.

Barbaro J, & Dissanayake C. (2010). Perceptive identification of autism spectrum disorders in infancy and toddlerhood using developmental surveillance: the social attention and communication study. *Journal of Developmental and behavioural Paediatrics*,31:376-85.

Bryson et al., (2008) Autism Observation Scale for Infants. *J of Autism & Devel Disord*, 38: 731-738

Chawarska, K., Paul, R., Klin, A., Hannigen, S., Dichtel, L. E., & Volkmar, F. (2007). Parental recognition of developmental problems in toddlers with autism spectrum disorders. *Journal of Autism and Developmental Disorders*,37: 62-67

De Giacomo, A, Fombonne, E. (1998) Parental recognition of developmental abnormalities in autism. *Eur. Child Adolesc. Psychiatry* 7:131-136

Filipek P, Accardo P, Ashwal S, Baranek G, Cook E & Dawson G et al. (2000). Practice Parameter: Screening and Diagnosis of Autism — Report of the Quality Standards Subcommittee of the American Academy of Neurology and the Child Neurology Society. *Neurology*,55: 468-479.

Howlin, P., Asgharian, A (1999) The diagnosis of autism and Asperger syndrome: findings from a survey of 770 families. [*Developmental Medicine & Child Neurology*](#) (1999), 41: 834-839

Johnson, C. P. & Myers, S .M. (2007). ‘Identification and Evaluation of Children with Autism Spectrum Disorders’, *Pediatrics* 120: 1183–215.

Kanner, L. (1943). Autistic disturbances of affective contact. *Nervous Child*, 2, 217-250.

Kobayashi, R., Muruta, T. (1998). Setback phenomenon in autism and long-term prognosis. *Acta Psychiatr. Scand.* 98: 296-303

McConkey, R., Truesdale-Kennedy, M. & Cassidy, A. (online 13 May, 2008). Mothers' Recollections of Early Features of Autism Spectrum Disorders. *Child and Adolescent Mental Health.* DOI 10.1111/j.1475-3588.2008.00495.x

Reznick, J., Baranek, G., Reavis, S., Watson, L. & Crais, E., (2007) A Parent-Report Instrument for Identifying One-Year-Olds at Risk for an Eventual Diagnosis of Autism: The First Year Inventory. *J of Autism and Devel Disord*, 37: 49-61

Tonge, B. J. (2002). Autism, autistic spectrum and the need for a better definition. *The Medical Journal of Australia*, 176(9), 412-413.

Volkmar, F., Charwarska, K. and Klin, A. (2005) Autism in Infancy and Early Childhood. *Annu Rev. Psychol.* 56: 315-336

Wetherby, A., Brosnan-Maddox, S., Peace, V., & Newton, L. (2008). Validation of the Infant–Toddler Checklist as a broadband screener for autism spectrum disorders from 9 to 24 months of age. *Autism*, Vol 12(5) 487–511

Wing, L. (1997). Syndromes of autism and atypical developmental disorders. In D. J. V. Cohen, F.R., (Ed.), *Handbook of autism and pervasive developmental disorders* (2nd ed., pp. 148-170). New York: John Wiley.

World Health Organisation. (1992). *International Classification of Diseases 10: Classification of mental and behavioural disorders.*

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