

## health

## Missing the cues

Autistic children often struggle to interpret the outside world. Sarah Womack reports on options for treatment

He is witty, highly intelligent and in possession of an imagination that should make him a strong candidate for any leading university.

But the teenage son of a close friend of mine is also emotionally troubled, socially inept, struggles to read and write and has only recently been allowed to catch a bus to the shops on his own.

Autism, a lifelong developmental disability, is one of the cruelest, most controversial and least understood of medical conditions.

Its sufferers are often hugely gifted intellectually, but are paralysed by their lack of something that is second nature to the rest of us – an ability to “read” and interpret the outside world. They struggle to pick up on the subtle, unconscious signals that other people are constantly sending out through body language, from the tone of the voice to facial expressions. This makes it hard to anticipate the thoughts, feelings and actions of others or know how to empathise, a fundamental element of social interaction. To them, the world must sometimes seem a frightening and unpredictable place. At least that is how the condition appears to someone like me, looking in from the outside.

Fortunately, my friend's son is well cared for at the moment at a specialist college where he is gradually being steered towards an increasingly independent adult life. No one knows, however, what his future holds.

Since the bitter controversy over whether the MMR (measles, mumps and rubella) vaccination could trigger the condition, debate about the nature and causes of autism has rarely been far from the news pages or television studios.

At the same time, there has been a growing awareness of the sheer size of the problem; there are now more than half a million people in the UK alone with autism, around one in every 100 people.

Recent estimates on the prevalence of autism range as high as 0.25 per cent to 0.5 per cent of the worldwide population. Whether there has been a real rise in the number of cases in recent years, or whether this is merely the result of better – or broader – diagnosis is a matter of dispute, but what is certainly true is that specialists are seeing more parents of autistic children turning to them for help.

Sara Ahmad Baker, of the Dubai Autism Centre, said, “Since we opened our doors for diagnosis in 2003, we used to see around 30 children of whom most would have been diagnosed with some degree of autism. But in the academic year of 2007-2008, the number jumped to almost 85 children and is on the increase.”

The severity of autism ranges across a spectrum, from the mild-



Autism is a complex developmental disability and is four times more prevalent in boys than girls. Roy McMahon / Corbis

er Asperger's syndrome to more profound cases in which children hardly communicate at all.

Associated symptoms include learning difficulties such as dyslexia, and dyspraxia, a motor skill disorder characterised by a form of clumsiness whose cause is unknown. Those who have dyspraxia may simply have trouble with things such as shoe laces, jumping over a rope or throwing a ball. Others have difficulty speaking.

Then there is attention deficit hyperactivity disorder, a range of problem behaviours associated with poor attention span. Unravelling it all can seem like peeling an onion. Nevertheless, scientists believe that a combination of factors, both genetic and environmental, can result in changes to brain development that cause autism.

Jill Boucher, the honorary professor of Psychology at Warwick University and a member of the Autism Research Unit at City University in the UK, said that researchers were beginning to identify the genes that may play a role.

“Any one gene contributes only

some small degree of ‘susceptibility’,” she said. “Autism probably results from the cumulative effects of carrying several susceptibility genes.”

Boucher, whose new book, *The Autism Spectrum: Characteristics, Causes and Practical Issues*, will be published later this year, said that “environmental” factors were also being investigated. “Progress is being made, and there is every reason to expect this to accelerate over the next decade, but there are no certainties as yet.”

Recent groundbreaking research published this year in the *Journal of Science* has found that a set of six genes that are strongly linked to brain development in the first year of life are abnormal in many autistic children.

The findings have raised hopes because some of the genes are not entirely deleted in the autistic children but have been “switched off” by mutations – raising the prospect that they could be switched on again by drugs or therapies.

One of the researchers, Dr Christopher Walsh of Harvard Universi-

ty, said: “Autism symptoms emerge at an age when the developing brain is refining the connections between neurons (nerve cells which carry brain messages) in response to a child's experience.

“Whether or not certain important genes turn on is dependent on experience-triggered neural activity. Disruption of this refinement process may be a common mechanism of autism-associated mutations.”

He added: “By being able to characterise more about the genetic mutations at work in various forms of autism, we may be able to predict which kids need gene therapy, and which just need some form of training.”

The possibility that the MMR vaccine could provide an “environmental” cause by triggering autism in genetically susceptible children – a hugely controversial theory that emerged a few years ago – appears to have been more or less buried.

Boucher said that there was now a massive amount of evidence that demonstrated “beyond reasonable doubt” that there was “no statisti-

cally significant relationship between MMR and autism”.

So what about the future? “There are no miracle cures, nor likely to be because of the diversity within the spectrum, and the diversity of causal routes leading to Autism Spectrum Disorder-related behaviours,” she said.

But she said that early intervention could make a big difference.

She added: “I have watched two children develop from preschool to young adulthood amazingly well in families that relied hardly at all on paid therapists or clinicians, but rather on family members, skilled playgroup leaders, sympathetic school settings and the use of support workers, with constant input from parents who knew what their child needed.”

In Abu Dhabi, a 10-year, Dh477 million project is under way to provide state-of-the-art services for autistic children.

The health authorities have formed a partnership with the award-winning New England Centre for Children in the US, which is based near Boston, to train staff and create treatment centres and schools.

Vincent Strully, the chief executive officer and founder of the Centre said: “We have been sending staff to the UAE since 1997 when some families privately asked for our help, and in January 2007 we were approached by the Abu Dhabi health authorities to negotiate the re-creation of our centre over here.” The new Abu Dhabi centre already provides school places for 12 autistic children and another dozen places will become available soon.

Within two years, a new facility combining a school for more than 100 children, a treatment centre and a residential block for severe cases will be opened, and the programme would then be rolled out across the emirate.

Strully said: “If children are diagnosed early enough and receive intensive behavioural treatment, significant improvements can be achieved.”

Boucher is reluctant to give detailed advice for those looking after autistic children because, as she points out, it is easy for an outsider but far more difficult for the parent or carer. But she did offer some thoughts. “I think it would be impertinent of me to suggest ‘the most helpful thing’ because parents who have been there would give insider advice and this might be very varied. I suspect they might say things like, ‘look after yourselves as parents, and the family as a whole’. Laugh – and cry when necessary.

“Learn to love the child and to value them for who they are, and try not endlessly to grieve or focus on what you might have hoped them to be.”