Autism Part III: Treating Autism Spectrum Disorders

In the last two months we've reviewed the causes and diagnosis of autism spectrum disorders (ASD), a group of neurologic conditions that affect nearly one in every 150 children. This month we'll look at therapies for ASD, including behavioral techniques, medications, and complementary and alternative medicine (CAM).

Does anyone really know what works for ASD?
First officially recognized in 1980, autism is a young diagnosis, and our understanding of the condition is growing rapidly. Like all new research topics, ASD have given rise to myriad theories. There is now a small but growing body of literature on what does and doesn't work to improve the lives of people with autism. ASD are rooted in fundamental changes of brain structure and function. While no therapy can "cure" ASD, some are clearly helpful, others don't help, and at least one is potentially fatal.

Are there effective behavioral therapies for ASD?
Convincing evidence shows that early behavioral interventions for ASD lead to better outcomes for patients. An approach called Applied Behavior Analysis (ABA) currently has the best clinical evidence. In ABA, trained professionals analyze a child's problem behavior to determine why he does it. They then try to restructure the environment to reinforce more desirable behaviors. Another approach, Structured Teaching (the TEACCH method) uses a more structured environment to improve behaviors. Structured Teaching also has some good data to support it, although the studies are not as rigorous as those favoring ABA.

Are developmental therapies the same as behavioral therapies?
Instead of focusing on problem behaviors, developmental therapists address the gaps in development that lead to autistic behaviors. The theory is if they can encourage the child's development as a whole the behaviors will then improve. Among these approaches the Denver model has the best supporting data, but so far it has not been tested as well as ABA.

What's the role of speech therapy and physical therapy?
Communication is a huge hurdle for most children with ASD. Treatment programs often include intensive speech therapy, involving not only therapists but teachers, peers, and family members. The Picture Exchange Communication System (PECS) helps autistic children initiate communication using pictures with the hope of later transitioning to words. Sign language or gestures may work similarly.

Social skills instruction is another promising discipline. Therapists work with children to teach them symbolic play and joint attention (consciously sharing an experience with another person), skills which have wide ramifications for interacting with others.

Occupational therapists focus on skills like fastening buttons and using scissors that are basic to daily function. Sensory Integration (SI) therapists address such features of ASD

as hypersensitivity to sounds, textures, or smells. Solid research supporting these approaches remains to be published.

What medical issues face children with ASD?
Autistic children usually need extra time to accommodate to the novel surrounding of the doctor's office; they often have trouble explaining what's bothering them or even where they hurt; they may find the physical exam especially uncomfortable and respond in ways that make it hard for the doctor figure out what's wrong. Often a sudden worsening of autistic behaviors is the only sign a child has a simple problem like an ear infection.

Both epilepsy and gastrointestinal problems like constipation and vomiting are more common in children with ASD. Current evidence does not favor universal screening of these children with EEG's or gastrointestinal studies, but doctors caring for these children should have a low threshold to look for these problems when symptoms arise.

Do children with ASD have heavy-metal poisoning?
Some autistic children follow such restrictive diets that they become iron or zinc deficient and start ingesting dirt or other objects, increasing their risk of lead poisoning. The habit of mouthing objects may also put autistic children at risk of lead exposure. Screening guidelines for lead are the same as for other children, and there is no indication for routine heavy metal screening, much less chelation therapy. There has already been one well-documented death of an autistic child from unnecessary chelation.

Should children with ASD be vaccinated?
This emotionally charged issue dates back to a now-discredited 1998 article by Dr. Andrew Wakefield in the *Lancet* suggesting a relationship between ASD and measles/mumps/rubella vaccine. The original article was withdrawn by ten of its thirteen authors under a shadow of conflict of interest, and multiple large and rigorous studies since have failed to show any relationship between vaccines or thimerosol preservatives and autism. Nonetheless fears spawned by the article have prevented thousands of well-meaning parents from protecting their children against deadly diseases like meningitis, whooping cough, and lockjaw.

Should children with ASD be treated with psychotropic medicines?
Forty-five percent of children and seventy-five percent of adults with ASD take some form of psychiatric medication. Among the drugs shown to be effective for children with ASD are the antidepressants fluoxetine and fluvoxamine, the stimulant methylphenidate, the antipsychotic risperidone, and the alpha-2 agonists clonidine and guanfacine. These medications are best managed by a psychiatrist or developmental specialist with extensive experience with ASD.

What complementary and alternative medicine treatments work for autism?
Studies of vitamin C supplementation and music therapy have both shown positive results. Supplementation with omega-3 fatty acids has some weak support but needs more study. Research so far has failed to show any benefit from the popular gluten- and casein-free diet, but larger studies are pending. Studies have failed to show any benefit from

secretin, dimethylglycine, vitamin B6, and magnesium. Neither auditory integration training nor facilitated communication have held up to scrutiny.

To protect your child, make sure any experimental therapy is given in the context of a legitimate clinical trial with full informed consent and an institutional review board overseeing the study's design and safety.

Sadly autism has spawned more than its share of charlatanism. A good rule of thumb for medicine is if it sounds too good to be true, it probably is too good to be true..