



Tourette Syndrome Can Be Treated

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"The first time that either my husband or I heard the words Tourette syndrome was the day our seven-year-old son was diagnosed...Then followed horrendous medication trials, which had our son "on the ceiling" one day, and "out to lunch" the next. We felt overwhelmed and alone... Now, four years later, our son's school is more responsive to his needs, his medications are stable, he has good friends, and we have a great doctor and family support system. Our life is back on an even keel."

The above scenario may seem all too familiar for some parents who have a child with Tourette syndrome (TS). Despite the uncertainty and confusion parents frequently experience when trying to obtain the best treatment for their child, there are options for parents and children. Indeed, parents now have unprecedented access to a sizeable knowledge base on treatments for their child's condition.

Today, we know that TS is a genetic, neurological disorder characterized by the waxing and waning of multiple motor and vocal tics—involuntary, rapid, sudden movements or vocalizations. While there is some debate regarding the number of children who meet diagnostic criteria to be classified with TS, the estimates range from roughly 3 to 7% of all school-aged children. In addition, we now know the average age of onset for tics is approximately seven years, and boys are three to four times more likely

to have the disorder than girls. The current conception of TS is that it is a spectrum disorder, like autism, whereby some people have only a few minor motor and vocal tics, and others have tics plus additional symptoms such as obsessions, compulsions, inattention, impulsivity, and/or learning problems. Parents should keep in mind, however, that the majority of children who suffer from TS do not have severe enough symptoms to warrant treatment. Not be ignored, however, is the substantial number of children who have such a severe condition that some type of treatment is necessary.

What treatments are available for my child?

Selecting the most appropriate treatment can often be a very tricky issue. The symptoms associated with TS that most often require treatment are motor and vocal tics, and symptoms of attention deficit hyperactivity disorder (ADHD) and obsessive-compulsive disorder (OCD). Generally, the first line of treatment defense offered to parents to combat the symptoms of TS has been, and continues to be, some form or combination of psychopharmacological treatment (e.g. haloperidol to address tics). This is in part due to the commonly held perception that other non-medication options, referred to here as "psychosocial treatments," are ineffective, although the empirical research base suggests otherwise.

Recent research has revealed new, promising medications that have relatively benign side effects. Notwithstanding

the general effectiveness of pharmacological treatments, parents should be cognizant of the fact they do not come without certain limitations and consequences. Ask your physician to discuss some of the medication side effects with you, such as anxiety or, more seriously, tardive dyskensia (an irreversible movement disorder). Nonetheless, medication is generally effective at suppressing certain symptoms while the individual is taking it, but it does not teach children important coping and behavioral skills to help them better adjust to and manage their condition. Some combination of treatments—both pharmacological and psychosocial—may perhaps be most effective.

The good news for parents is that there exists a reasonably large literature base identifying psychosocial treatments with demonstrated effectiveness as alternatives to pharmacological ones. With respect to ADHD and OCD symptoms, researchers have already identified several psychosocial treatments that are supported by high quality scientific evidence. For example, behavior modification in classrooms and parent training, which also employs behavior modification, has been effective in reducing ADHD-related problems. For OCD, cognitive therapy and an approach called exposure and response prevention (ERP) have produced substantial reduction in obsessions and compulsions. We recently surveyed the literature base to identify empirical evidence for the treatments targeted to the symptom of tics. The fol-

lowing are some of the findings we came across during our review.

So, what does the research say about psychosocial treatments for TS?

A recent study published in a 2004 issue of *Behaviour Research and Therapy* by Cara W.J. Verdellen and her associates from the Netherlands investigated the implementation of exposure and response prevention (ERP) to reduce tic symptoms in individuals with TS. They compared the effects of ERP against a habit reversal (HR) condition. ERP is based on the premise that the individual can habituate to the premonitory experiences that precede tics and, thus, it entails (a) repeated exposure to the sensations and urges that precede tics and (b) subsequent response prevention of the tics. HR, on the other hand, is the gold standard of psychosocial treatments for TS and consists of a multi-component treatment that includes awareness training, excessive practice, teaching of an incompatible response with the tic, relaxation techniques and social reinforcement tactics. Our review of published research indicated that HR can produce a 55 to 95% reduction in tics.

Verdellen and her co-workers randomly assigned 43 participants to either the ERP or HR treatment. They found that there were no significant differences between the two conditions. The percentage of patients demonstrating clinically significant improvements was calculated, and results suggested that 95% of the participants in ERP and 83% of the participants in HR demonstrated clinically significant outcomes. Importantly, the results were maintained at a three-month follow up. Overall, the authors concluded that ERP and HR are effective treatments to reduce tic symptomology in patients with TS. What is particularly interesting about the findings from Verdellen's study is that ERP is also an evidence-based, or scientifically valid, treatment for OCS. Hence, for children presenting both OCS

and tic symptoms, ERP can potentially offer more "bang for the buck" by addressing both symptoms.

Steve Olson's article *Making Sense of Tourette's* appeared in a 2004 issue of the prestigious journal, *Science*. Olson acknowledges that "the most common treatment for Tourette syndrome remains what it has been for the past four decades: using drugs to alter activity of dopamine and related neurotransmitters in the basal ganglia." However, he also makes a point to recognize the promise of certain psychosocial treatments to treat symptoms of TS. In particular, Olson notes the research of John Piacentini at the University of California, Los Angeles who is currently involved in a large-scale study to investigate the clinical utility of psychosocial therapies.

Piacentini and Chang just published an article (November, 2005) in which they reviewed the many components of HRT and illustrate these with child treatment cases. They note the advantage of including motivational techniques with the child. In addition to social support and a reward program, they include techniques like the "Tic Hassles List," whereby the child lists all of the negative features associated with his or her tics (e.g. embarrassing, painful, disruptive, need to come to clinic). The authors note that procedures like this break down denial of symptoms, enhance motivation, and lead to more realistic acceptance of the condition.

What was particularly surprising after examining the treatment literature was the fact that psychopharmacological or psychosocial treatments are generally administered and investigated in isolation—not together. Given the shortcomings associated with both approaches to treatment, a combined treatment program consisting of both drug and psychosocial therapies potentially offers the most benefit to children. This type of combination research has been performed with respect to the study of Attention Deficit Hyperactivity Disorder, or ADHD (the study is known as the

Multimodal Treatment Study or MTS). In the ADHD field, the combination of pharmacological and psychosocial treatments produced the greatest long-term effects when compared to pharmacological and psychosocial-only treatment programs. We are hopeful that future researchers will explore different treatment regimens combining psychopharmacological and psychosocial treatments to address the symptoms associated with TS. In this way, parents would be afforded more flexibility in selecting the most appropriate treatment program for their children.

What are some considerations I should weigh when selecting a treatment for my child?

We offer the following recommendations for parents to consider when considering which "recipe" will work best for their child with TS. These options should be discussed thoroughly with your child's attending physician.

- Find out what treatment options are available in your community, and weigh all possible treatment options for your child before making a decision.
- Think about both psychopharmacological and psychosocial treatments.

Determine whether immediate relief is necessary for your child:

- If so, psychopharmacological treatments may be most appropriate.
- If not, perhaps try some type of psychosocial treatment first.
- Prioritize treatments according to the most debilitating symptoms.
- Consider a combined treatment approach if the symptoms are severe.
- Pay close attention to whether your child is responding appropriately to the treatment. Watch for symptom reduction. 

References cited or consulted in this month's Research Reflections can be obtained by writing to: epedit@aol.com

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TITLE: Tourette Syndrome Can Be Treated
SOURCE: Except Parent 36 no4 Ap 2006
WN: 0609103304021

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