✓Treatments *That Work*™

Managing Tourette Syndrome

A Behavioral Intervention for Children and Adults

Therapist Guide

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About Treatments *That Work*™

Stunning developments in healthcare have taken place over the last several years, but many of our widely accepted interventions and strategies in mental health and behavioral medicine have been brought into question by research evidence as not only lacking benefit, but perhaps, inducing harm. Other strategies have been proven effective using the best current standards of evidence, resulting in broad-based recommendations to make these practices more available to the public. Several recent developments are behind this revolution. First, we have arrived at a much deeper understanding of pathology, both psychological and physical, which has led to the development of new, more precisely targeted interventions. Second, our research methodologies have improved substantially, such that we have reduced threats to internal and external validity, making the outcomes more directly applicable to clinical situations. Third, governments around the world and healthcare systems and policymakers have decided that the quality of care should improve, that it should be evidence based, and that it is in the public's interest to ensure that this happens (Barlow, 2004; Institute of Medicine, 2001).

Of course, the major stumbling block for clinicians everywhere is the accessibility of newly developed evidence-based psychological interventions. Workshops and books can go only so far in acquainting responsible and conscientious practitioners with the latest behavioral healthcare practices and their applicability to individual patients. This new series, Treatments *That Work*™, is devoted to communicating these exciting new interventions to clinicians on the frontlines of practice.

The manuals and workbooks in this series contain step-by-step detailed procedures for assessing and treating specific problems and diagnoses. But this series also goes beyond the books and manuals by providing ancillary materials that will approximate the supervisory process in assisting practitioners in the implementation of these procedures in their practice.

In our emerging healthcare system, the growing consensus is that evidence-based practice offers the most responsible course of action for the mental health professional. All behavioral healthcare clinicians deeply desire to provide the best possible care for their patients. In this series, our aim is to close the dissemination and information gap and make that possible.

This therapist guide addresses the treatment of Tourette syndrome (TS) in children and adults (ages 9 and older). The goal of this 11-session program is to teach the patient effective tic management skills rather than to cure the tic disorder. A useful adjunct or alternative to medication, the treatment described in this guide is scientifically based and proven effective. Over the course of the program, individuals are taught how to be aware of their tics, how to substitute other behaviors for their tics, and how to avoid factors that may make their tics worse. Relaxation techniques to reduce stress, which can exacerbate tic symptoms, are also a part of therapy. Relapse prevention strategies help patients keep up their progress after treatment has ended.

Complete with step-by-step instructions for running sessions, as well as lists of materials needed, session outlines, and copies of forms necessary for treatment, this therapist guide provides you with all the information you need to successfully treat tic disorders. Also available is a corresponding workbook for parents and their children, as well as a workbook designed specifically for your adolescent and adult clients. Together, these books form a complete treatment package that clinicians will find to be a welcome addition to their armamentarium.

David H. Barlow, Editor-in-Chief,
Treatments *That Work*™
Boston, MA

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Chapter 1 *Introductory Information for Therapists*

Background Information and Purpose of This Program

Treatment for those with tic disorders, including Tourette syndrome (TS; also referred to as Tourette's disorder), has primarily been conducted by psychiatrists and neurologists. Medications have been the treatment of choice and can be effective in managing symptoms. However, a useful adjunct or alternative to medication has emerged. Behavior therapy for tic disorders has been discussed in the literature for more than 30 years, although many mental health providers remain unfamiliar with this treatment (Marcks, Woods, Teng, & Twohig, 2004).

This manual was written to familiarize therapists with this therapeutic approach. The treatment is an 11-session package for children and adults (ages 9 and older). Psychoeducation about tic disorders is blended with multiple components of behavior therapy, including habit reversal training (HRT), relaxation training, and function-based treatments. It is important to understand that the goal of this program is to teach the patient effective tic management skills rather than to cure the tic disorder.

Given the higher prevalence of tic disorders in pediatric populations compared to adults, this therapist guide focuses on the treatment of children. Nevertheless, modifications that may be useful for adults are offered throughout (see "Working With Adults" sections in session chapters), and separate adult-focused and parent (i.e, child-focused) workbooks are available. Although the term "TS" is used throughout the manual, the treatment can be applied to the other tic disorder diagnoses, including chronic motor or vocal tic disorder and transient tic disorder (TTD).

Clinical Characteristics of TS

TS is a chronic, neurobehavioral disorder of childhood onset characterized by motor and vocal tics. Table 1.1 provides examples of various simple and complex, motor and vocal tics. TS symptoms often appear between the ages of 5 and 7 years and typically begin with eye blinking and facial movements. Motor tics often precede the onset of vocal tics and simple tics often precede the onset of complex tics (Leckman, King, & Cohen, 1999).

Table 1.1 List of Simple and Complex Tics

Simple motor tics	Complex motor tics
Eye blinking	Eye movements
Eye movements	Mouth movements
Nose movements	Facial movements or expressions
Mouth movements	Head gestures or movements
Facial grimace	Shoulder movements
Head jerks or movements	Arm movements
Shoulder shrugs	Hand movements
Arm movements	Writing tics
Hand movements	Dystonic or abnormal postures
Abdominal tensing	Bending or gyrating
Leg, foot, or toe movements	Rotating
	Leg, foot, or toe movements
	Blocking
	Tic-related compulsive behaviors (touching, tapping, grooming, evening-up)
	Copropraxia (obscene gestures)
	Self-abusive behavior
	Groups of simple tics
Simple vocal tics	**Complex phonic symptoms**
Sounds, noises (coughing, throat clearing, sniffing, or animal or bird noises)	Syllables
	Words
	Coprolalia (obscene words)
	Echolalia (repeating others' words)
	Palilalia (repeating your own words)
	Blocking
	Disinhibited speech

The number of tics, their frequency, duration, intensity, and complexity define tic severity. In mild cases, tics may be restricted to the face, be infrequent, of minimal intensity or complexity, and result in little or no impairment. In more severe cases, tics may involve numerous muscle groups, including the shoulders, arms, legs, and torso; are intense and complex; and result in considerable distress or impairment. Although previously considered to be essential for diagnosis, coprolalia (curse words or socially inappropriate utterances) occurs in only 10–15% of patients (Leckman, King, & Cohen, 1999).

For many, tics are a chronic problem that waxes and wanes, peaking in severity in the early teens, with some improvement in early adulthood (Leckman et al., 1998). Many patients describe an urge or sensation immediately before the occurrence of a tic (Leckman, Walker, & Cohen, 1993). Patients may report that attempts to resist performance of the tic lead to an intensification of this premonitory urge or sensation. Performance of the tic, often to satisfy the premonitory sensation, will at least temporarily quiet the sensation (Himle, Woods, Conelea, Bauer,& Rice, 2007). Indeed, many patients report that tics are performed to satisfy the premonitory sensations (Bliss, 1980; Leckman et al., 1993). The presence of premonitory sensations distinguishes TS from other movement disorders such as Parkinson's disease, Huntington's chorea, and hemiballismus (Scahill, Leckman, & Marek, 1995).

Prevalence of Tic Disorders

Tics are relatively common in children, affecting 12–18% in the school-age population (Scahill, Sukhodolsky, Williams, & Leckman, 2005). Although TS was considered a rare disorder with an estimated prevalence of 1 per 2,000, more recent data from well-designed community surveys suggest that it may be as common as 1–8 children per 1,000 (Costello et al., 1996; Hornse, Banerjee, Zeitlin, & Robertson, 2001). Moreover, if milder forms of the disorder are considered, chronic tic disorder (CTD) prevalence may be as high as 1.5–3% (Scahill et al.).

Co-Occurring Conditions in TS

Those with TS frequently experience co-occurring conditions. Research suggests that approximately 50% of those with TS also have attention-deficit/hyperactivity disorder (ADHD), and 50–90% of persons with TS develop obsessive-compulsive behavior, although only 30–40% develop actual obsessive-compulsive disorder (OCD) (Dedmon, 1990). Individuals with TS also have a higher likelihood of developing depression (Dedmon) and exhibit higher rates of learning disorders, particularly in the areas of mathematics and reading (Burd, Kauffman, & Kerbeshian, 1992).

Impairment Associated With Tic Disorders

The presence of tics can have a negative impact on social, educational, and occupational functioning (Stokes, Bawden, Camfield, Backman, & Dooley, 1991; Sukhodolsky et al., 2003). Children and adults with CTD report problems in dating and maintaining friends (Champion, Fulton, & Shady, 1988) and can be perceived negatively by peers because of the tics (Boudjouk, Woods, Miltenberger, & Long, 2000; Friedrich, Morgan, & Devine, 1996; Woods, Fuqua, & Outman, 1999). Thus, effective treatment strategies to reduce tics may reduce the overall impairment associated with TS. It is also important to note that co-occurring conditions appear to be a better predictor of psychosocial impairment than the tics themselves. As such, clinicians who are treating individuals with multiple diagnoses should consider the negative impact of co-occurring conditions when planning and prioritizing treatment goals.

Diagnostic Criteria for Tic Disorders

In Tables 1.2–1.4, we list the *Diagnostic and Statistical Manual of Mental Disorders*, *Fourth Edition*, *Text Revision* (DSM-IV-TR) (American Psychiatric Association, 2000) criteria for TTD, CTD, and TS (called Tourette's disorder in *DSM-IV*).