



ASK THE MAB

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I've heard that the National Institute of Mental Health is funding studies of behavioral/non-medication treatments for TS. What are the studies all about?

Encouraged by widespread public interest in delivering healthcare through non-pharmaceutical means, exploration of non-medication options to manage tics is growing. These options range from using non-prescription substances in the diet to behavior modification therapies. It is important to recognize that traditional medication treatments and alternative interventions are not "either/or" options—both approaches can be used together, and may provide a more favorable outcome than using either alone.

Results from well-designed studies help us decide how to manage tics. To date, very few "Randomized Controlled Trials" (RCTs) that investigate non-medication options for TS have been conducted. RCTs are scientific research's "gold standard" for testing the efficacy of possible treatments.

Despite the lack of scientific evidence, there is a wealth of anecdotal reports and interest in these untested approaches. The National Institutes of Health (NIH) and other agencies are taking this public interest very seriously. In fact, an additional branch of the NIH was established to fund "complementary and alternative healthcare" RCT research.

Currently, a TSA-funded RCT study is underway to explore the impact of fish oil on tics. In time, we're likely to see more funded studies. While imperfect, results of such trials may give healthcare providers more confidence about such treatment decisions. TSA has established an MAB task force to report on complementary/alternative approaches to TS symptom reduction.

Another area being studied involves behavioral approaches to managing tics and will be the focus of this discussion.

"Behavioral" refers to the learning and unlearning of activities. Often, behavioral therapies are based on: 1) Strengthening a desired activity by linking it to "rewards" or pleasant experiences; or 2) Strengthening a desired activity by linking it to reducing unpleasantness (avoiding punishment). When a behavior increases as the result of

a reward, it has been "positively reinforced." When a behavior is increased due to reduction or avoidance of punishment, it has been "negatively reinforced."

Most adults and children older than nine or ten can describe feeling a "premonitory urge" before having a tic. This urge is an unpleasant sensation (pressure, tension, etc.) and the tic helps to relieve it. Thus, performing the tic has become linked to relief from the sensation; the tic behavior is strengthened (increased), or "negatively reinforced" by avoiding or reducing the discomforting sensation of the premonitory urge by ticcing. Even without significant awareness of the urge, the tic may have become a person's automatic response to it.

Although tics are certainly not voluntary, many older children and adults with tic disorders have a varying degree of short-term control over them. The result of this control, though, is the continuation of the unpleasant urge and eventually gives way to tics.

Comprehensive Behavioral Intervention for Tics (CBIT)

A broad approach to tic management

HRT+FA = CBIT

Funded by the NIH through TSA, several research medical centers are cooperating on an RCT to study Comprehensive Behavioral Intervention for Tics (CBIT)—a new term that involves two not-so-new therapy approaches:

1. Habit Reversal Therapy (HRT), a behavioral therapy that was designed in the early '70s to help reduce a variety of unintentionally learned habits.
2. Functional Analysis (FA) emphasizes social influences.

Although I will talk about HRT and FA separately, it is important to understand that CBIT is a *combination* of both HRT and FA. If it doesn't have both approaches, it isn't CBIT.

Much of the following information has been adapted from an academic presentation by Dr. John Piacentini of the UCLA Medical Center, an expert researcher in tics and behavior therapies and head of the NIH-funded multi-site CBIT study.

Habit Reversal Therapy (HRT)

HRT involves:

1. **Awareness Training** — increases awareness of tic premonitory urges and of the tics themselves.
2. **Relaxation Training** — teaches a person to relax during times of stress.
3. **Competing Response** — when the premonitory urge occurs, a person learns a competing behavior that interferes with and/or substitutes for the tic.
4. **Social Support** — help and encouragement from family, teachers and friends. Methods include "contingency management" (e.g. positive reinforcement such as praise for adhering to awareness training exercises).

There have been a few RCTs studying HRT in TS. Some of the results suggest strongly that HRT is effective in reducing tics, and that the results may be lasting.

While there are many HRT methods, its main goal is to interfere with the negative reinforcement (i.e. relief from the urge). If one can learn to *de-link* the tic from the unpleasant urge, then little by little, the urge may diminish and thus reduce the tic).

There are many ways of applying HRT interventions, but the following key points illustrate the basics:

- Starting with a relatively "big" and noticeable tic, HRT is applied at a progressive pace that makes sense for the individual.
- A competing response to the tic is held for a minute or longer is practiced. If wrist flexing is the tic, then a competing response might be wrist extension.

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WORKPLACE GIVING

Whether United Way, Community Health Charities, the Combined Federal Campaign or many other workplace giving programs, if you haven't joined yet this year and named TSA as your charity of choice, it's not too late to do so now. Contact your company's human resources or payroll department for information, and if TSA is not a listed charity, make sure you request a write-in form.



Ask The MAB — Behavioral Intervention for Tics

- “Shaping” teaches new behaviors little by little, in steps, and often by demonstrating the desired behavior. If a child flexes his wrist as a tic, then he can be taught to flex it only half-way, and then only a quarter of the way, and then not at all. Another approach might be to flex the wrist the whole way, but perform the movement twice as slowly, then 3 times as slowly, and so on.
- Shaping procedures are often used for motor tics.
- Slow, rhythmic breathing is often used for reducing vocal tics.
- Simple eyeblinks are not often targeted by HRT

Functional Analysis

Functional Analysis (FA) involves identifying situations that maintain or increase either the severity or frequency of tics and then doing something about them. These situations have “antecedents” (things that happen before the tic) and “consequences” (things that happen after the tic). For children, typical antecedents may include making a demand, teasing, anxiety, or stress. Consequences may include such things as being told to leave the table or classroom, being comforted or teased, allowed to leave meals unfinished or homework/chores undone, or phrases like “Stop ticcing!” or “Mom, Billy’s bothering me!” In addition, other factors may include attention-getting behavior or escape from an

undesirable situation. For children, antecedents and consequences commonly occur at TV, homework, or mealtimes.

Either positive or negative consequences may reinforce tics. For example, Billy is watching TV, a time when for him, tics increase. His symptoms disturb sister Sue who complains to Mom. Billy’s tics worsen. Mom feels empathy for him, yells at Sue and sends her to bed. Billy now has the TV all to himself. His symptoms have been “positively reinforced” or rewarded.

Alternatively, Mom may yell at Billy to “stop ticcing” and send him to his room. He may feel persecuted. As his negative feelings and stress increase, so do his tics.

FA examines such situations and then develops “Function-Based Interventions” that are applied with the understanding that the tics/behaviors aren’t intentional, that the child isn’t aware of the situations which cause tics, and is treated as “normally” as possible. Function-based intervention methods may include:

- For antecedents — a 15-minute warning and “calm down time” prior to activities like homework or chores is provided.
- For consequences — parents, siblings, teachers, and friends are taught not to respond to tics or behaviors with teasing, admonishments or rewards.
- In general, there is no escape from responsibilities. For example, homework must begin at a pre-set time, whether or not tics are severe. If the tics are still

bothersome, then HRT or other strategies can be used to address them.

Active research on CBIT in chronic tic disorders is currently taking place at three sites: Johns Hopkins University in Baltimore (John Walkup, M.D.); UCLA in Los Angeles (John Piacentini, Ph.D.); and, University of Wisconsin in Milwaukee (Doug Woods, Ph.D.).

A parallel adult study has begun at Yale University in New Haven (Sabene Wilhelm at Massachusetts General Hospital, Boston; Lawrence Scahill MSN, Ph.D., Yale Child Study Center; and Alan Peterson, M.D., San Antonio).

TSA Golf in Spring, Summer and Fall

Highlights of the TSA Golf Circuit for 2006: The TSA Illinois Golf Classic will be held on Monday, June 26 at the Ravinia Green Country Club in Riverwoods; the TSA Rosenthal/Wein Golf Classic will be held on July 17 at Stanwich Golf Club in Greenwich, Connecticut; and TSA’s New York Golf and Tennis Classic at the historic Westchester Country Club is on September 25. For more information about TSA golf events, locations and schedules, call Susan Cimini, ext. 223 in the Development Office at national TSA.