

Ask the MAB

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Since the discovery of TS, there have been intense efforts aimed at developing pharmacological, behavioral and surgical therapies to manage tics and other features in those who are affected. There has also been some interest in examining complementary and alternative therapies (CATs) for the disorder. Indeed, over the years, there have been reports that changes in lifestyle factors such as diet and fitness, utilization of naturally occurring substances which include marijuana and vitamins, and employment of approaches such as acupuncture and hypnosis, can alleviate symptoms in some individuals with TS. The TSA is often asked by its members to comment on these and other claims of CATs for TS. This is often difficult as the TSA itself does not evaluate these approaches; reports are usually from observations of one or a few individuals, and in most cases results are not published in peer-reviewed journals. Nevertheless, the TSA has asked two members of our MAB to comment in this and the next issue of *Inside TSA* on several CATs which have been reported to provide benefit in TS.

I have heard that hypnosis has been helpful for some people with TS. To me it seems very confusing and I am extremely skeptical. Can someone explain to me if and how hypnosis can be at all useful for a person with TS?

Hypnosis is not sleep nor is it an unusual state of consciousness. It can be viewed as a state of hyper-focused attention with decreased peripheral awareness. In hypnosis, one can assert greater control over and influence aspects of experience normally considered beyond conscious control. For example, hypnosis to manage pain without drugs is an application with strong empirical support, highlighting one's ability to communicate with and deliberately control part of one's body. Hypnosis brings about a state of mind where a person's normal critical or skeptical nature is bypassed, thus allowing for acceptance of suggestions. This state of heightened receptivity for suggestions (induction) is developed with the cooperation of the individual. The suggestions can be delivered by a professional (hypnotist) or the individual can be taught to self-administer them (self hypnosis). The induction is followed by the therapeutic intervention which consists of providing positive suggestions.

When addressing tics, participants in hypnotherapy are usually taught to discriminate their tics from other movements. Simultaneously, self-hypnosis training is started, using relaxation techniques

and visual imagery for deepening of the trance. Improvement is sought by instructing the subjects to bring the relaxed feelings back with them when the session is over. Although hypnosis can be a powerful tool, it has not been adequately studied in TS. A recent study reported positive effects of self hypnosis training on 33 children and adolescents. More solid evidence is still required, since this study assessed efficacy based on self report of improvement and did not assess long term effect of self hypnosis.

Many people with TS have reported that exercise and other physical activities have reduced their tics. Are there studies that support this and how does it work?

The benefits of aerobic exercise are increasingly apparent in medicine, emotional health and wellbeing, and preventive health. There are many anecdotal reports of tic reduction benefits (and even some of tic worsening) resulting from exercise, but there are no published scientific studies examining exercise and impact on tics to determine "if" it works, much less "how." There have been several research studies looking at exercise among people with other developmental and behavioral challenges, such as with reading disabilities or attention deficit disorders. Results about possible benefits are not clear. TSA's website provides a useful publication by Mitzi Waltz titled, "Exercise, Sports and Tourette Syndrome: Potential Benefits Abound."

As a precaution, this and any related information should not be taken as medical advice. Anyone considering beginning an exercise program should consult with a qualified professional. Also, consider combining play and exercise into the family or individual lifestyle.

Case reports and two controlled studies have suggested that marijuana (Cannabis sativa) and delta-9-tetrahydrocannabinol (the major psychoactive ingredient of marijuana) can potentially decrease tics. However, these studies are not conclusive in proving beyond doubt that marijuana can address tics without significant side effects in a significant number of patients with TS. Is cannabis an effective treatment for tics?

It would be fair to conclude that the evidence on the effect of marijuana on tics is inconclusive. Furthermore, frequent use of marijuana can create many more problems than it can solve. Beyond susceptibility to its addictive nature,

chronic use can be associated with impairment in cognitive performance, which could have more deleterious effects than do tics. Please note that the use of cannabis is illegal in most of the U.S.

I have come across some information about nutritional supplements and vitamins, a few even claiming to be given specifically for TS. Do you know if any natural supplements can have a negative impact on someone with TS or are they all safe? Do any of them actually have a proven track record?

Many dietary supplements, herbs, vitamins and minerals have been promoted to reduce motor and vocal tics as well as the associated conditions that might accompany TS including ADHD, OCD, oppositional defiant disorder and anger outbursts.

Ningdong granule (ND), a traditional Chinese medicine compound, hyoscyamus and chamomilla, Pycnogenol and omega-3 fatty acids are some of the supplements that have been linked to treatment of tics or ADHD. Currently, none of them is proven to have a definite effect.

In 1994, Congress passed the Dietary Supplement Health and Education Act (DSHEA), which removed supplements from the same degree of scrutiny by the Food and Drug Administration (FDA) that is required for traditional medicines. The manufacturers do not have to prove to the FDA the safety and efficacy of supplements before they are marketed. Rather, it is up to the FDA to demonstrate that a dietary supplement or an herb is unsafe once it is already in the market. In a recent survey of 40 popular herbal dietary supplements, the Government Accountability Office found trace amounts of at least one potentially hazardous contaminant in 37 of the products tested. Some preparations have been found to contain heavy metals (lead, mercury and arsenic), bacteria, environmental chemicals and drugs (caffeine, corticosteroids, benzodiazepines such as Valium and diuretics).

When deciding to start a supplement, one has to keep in mind that although many dietary supplements (and some prescription drugs) come from natural sources, "natural" does not always mean "safe." For example, the herbs comfrey and kava can cause serious harm to the liver. It is important therefore to look for reliable sources of information on dietary supplements. Further information is available at the U.S. Food and Drug Administration: <http://www.fda.gov/Food/DietarySupplements/default.htm>. ■