

# Stonebriar Psychiatric Services News & Views

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## On Tics and Tourette's Syndrome

This article is not about the kind of ticks that we worry about finding on our dogs, but rather tics that are characterized by involuntary, or some might say semi-voluntary, motor movements or vocalizations that are patterned and repetitive. Motor tics are generally characterized by rapid and recurrent involuntary movements, frequently involving the head or facial area. These may be associated with repeated eye blinking, stretching one's back, facial twitching or head jerking, or at times shrugging one's shoulders. More coordinated movements are less common, but may involve several muscle groups such as skipping, hopping, or perhaps squatting. At times these may also include repeatedly touching others, smelling objects, or at times gesturing with one's hands, turning in circles, or shaking one's head. The pattern may change over time. Occasionally these may be associated with OCD related behaviors, including those that might cause self injury such as biting one's lips or excessive scratching or picking at one's cuticles.

Vocal tics are sudden, involuntary, and generally recurrent vocalizations. These may begin with such things as clearing one's throat or making grunting noises, hissing, or tongue clicking, and at times progress into saying certain phrases or words out of context. These at times may include repeating one's own words or at times those spoken by others. Less commonly these vocalizations may consist of uttering obscenities.

Tics often are inconsistent and may vary in terms of when they occur as well as the location of the tic. At one point they may be facial, at another it may involve another extremity or perhaps the shoulders or neck. The length of time during which they are active may also vary. In general, tics tend to be worse during times of stress, anxiety, excitement, or fatigue. However, they may also improve during activities requiring concentration or fine motor skills. They also tend to be less during sleep, but may not disappear entirely. Clinically their incidence tends to peak in intensity between the ages of 8-14, and most have a reduction in symptoms, if not total resolution, by early adulthood.

For most individuals experiencing tics, they describe a sense of feeling a tightening or tingling sensation before the tick occurs. Generally tics can be suppressed voluntarily, but this sense of tension frequently builds until the tic is performed. Simple tics of a transient nature are quite common and may affect 6-20% of children. They rarely begin before the age of 3, typically occur between the ages of 5-15, and most begin by age 8. They tend to be simpler in nature when they begin with motor tics more frequent than vocal, but may become more complex over time.

There is no clear objective testing available to confirm the diagnosis, as it is primarily made by history and occasionally seeing the tics occur during the examination. A video of the patient while the tics are occurring may also be helpful. Tics generally do not affect the individual's daily functioning, in contrast to numerous other movement disorders, but they certainly can at times be socially embarrassing for the individual. It has been noted that children with frequent sniffing, throat clearing, or eye blinking are often misdiagnosed with allergies or eye problems if the diagnosis of tic disorder is not considered.

### *Tourette's Syndrome*

Diagnostically, Tourette's syndrome is characterized by multiple motor tics and one or more vocal tics. They may develop around the same time or may fluctuate in terms of which tends to predominate at any given time. For the

diagnosis to be made, these tics must occur many times a day and nearly every day, or at least intermittently for at least one year, and with there never having been a tic free period of more than three consecutive months. The onset must also occur before age 18 and must not be due to some other medical condition.

Frequently individuals with Tourette's syndrome develop behavioral problems, particularly obsessive-compulsive behaviors and ADHD. The OCD rituals may consist of touching objects or people in a certain sequence or engaging in repetitive activities such as counting or hand washing. Studies have reported that up to 60% of individuals with Tourette's syndrome also have symptoms of ADHD. They also frequently struggle with anxiety, depression, and academic and/or social difficulties. Tourette's syndrome usually manifests between the ages of 2-15 with approximately 50% by age 7. It occurs in males to females at a ratio of about 3 or 4:1 and affects up to 1% of the general population.

It is felt that primary Tourette's syndrome likely has at least some genetic basis and often tends to run in families. However, no specific gene or genetic cause has yet been identified. The underlying physiologic mechanism causing Tourette's syndrome is still unclear. Various neuroimaging studies have been performed, along with studies relating to neurotransmitters, although a clear-cut correlation or area of involvement in the brain has not yet been found.

### ***Treatment For Tics and Tourette's Syndrome***

The primary goal for treating general tic disorder or Tourette's syndrome is to reduce the motor and vocal tics to a level so that they are not causing significant social or physical problems, along with controlling the behavioral problems that may be associated with them, such as OCD or ADHD related symptoms.

There have been a number of behaviorally oriented treatments which have been found to be beneficial in many cases. These include such things as education interventions, habit reversal training, increasing awareness of family, school, and peers to reduce the social stigma, and also exposure therapy with behavioral prevention. Generally pharmacotherapy is a second choice unless the tics are causing significant functional impairment or discomfort.

Currently, first-line medication treatment frequently may involve the use of clonidine and guanfacine or at times topiramate (Topamax). These medications are often effective and tend to be relatively low in serious side effects. Certain other medications that block dopamine receptors include the antipsychotic medications, both the older ones as well as the newer ones. The newer antipsychotic medications are often termed "atypical", and both of these groups are generally more effective than the first line treatments mentioned, but these also have the potential for more serious side effects. Recently there has also been the use of injecting botulinum toxin (similar to Botox) into the involved muscles with regard to motor tics, and this frequently reduces the tic movements as well as these sensations that precede the tic. There have also been studies in adults with severe debilitating tics unresponsive to medication and behavioral treatments in which deep brain stimulation may be helpful. Medications also may be necessary to help with the other behavioral components related to ADHD, OCD, anxiety, or depression related symptoms.

Although we still do not have all of the answers with regard to general tic disorders or Tourette's syndrome, significant progress has been made and research continues. The first step, however, is to have an adequate evaluation performed by a neurologist or psychiatrist, and then one can begin to explore treatment options.



Do you have topical requests for future newsletters? Let us know at: NewsletterQuestions@stonebriarps.com



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