

Tourette's syndrome (TS), or Tourette's disorder, is a neurologic illness that begins in childhood or adolescence. The primary feature of TS is *tics*—movements or vocalizations that are sudden, rapid and purposeless. Tourette's syndrome is treated by both psychiatrists and neurologists as many people with TS have other illnesses such as obsessive-compulsive disorder (OCD), insomnia and attention deficit/hyperactivity disorder (ADHD).

What is characteristic of Tourette's syndrome?

- Both multiple motor and one or more vocal (phonic) tics are present at some time during the illness, although not necessarily simultaneously.
- Tics are recurrent, non-rhythmic, actions or vocalizations that can usually be suppressed for a period when a person focuses on stopping them.
- Less than 40 percent of people with TS have *coprolalia* (outbursts of swearing).
- Most people experience a discomforting sensation prior to their tics that disappears after they carry out the tic.
- Tics occur many times a day, nearly every day or intermittently throughout a year.
- Onset occurs before the age of 21.
- Symptoms can disappear for weeks or months at a time and severity can change.
- Most people experience less tics as they get older; nearly 50 percent of people have significantly less tics as they reach adulthood.

What are the first tics that may be characteristic of Tourette's syndrome?

Usually, a facial tic, such as rapid blinking of the eyes or twitches of the mouth, may be the first indication a parent has that their child may have Tourette's syndrome. Involuntary sounds, such as throat clearing and sniffing, or tics of the arms and legs may be the first sign in other children.

What other symptoms are associated with Tourette's syndrome besides tics?

Approximately 50 percent of people with TS experience inattention, hyperactivity, and other distressing symptoms that are characteristic of ADHD. In some people, these may actually be the most frustrating and worrisome symptoms of their illness. People with TS are at increased risk for developing anxiety disorders. Approximately one-third of people with TS experience severe and impairing obsessional thoughts and compulsive behaviors and may be diagnosed with OCD. Other common difficulties include learning disabilities and developmental stuttering.

What causes Tourette's syndrome?

Approximately one in 200 children will have Tourette's syndrome. Although the cause has not been definitely established, there is growing scientific evidence that TS is caused by a

neurological illness affecting neurons (nerve cells) in different parts of the brain. People with TS may also have a dysfunction of their neurotransmitters—the chemicals that neurons use to communicate with each other. Multiple genes have been shown to cause the symptoms of Tourette's syndrome. Boys are approximately four times more likely to have Tourette's syndrome than girls.

How is Tourette's syndrome diagnosed?

No blood analysis, x-ray or other medical test exists to identify Tourette's syndrome. The first step in diagnosis occurs when a young person is brought to their doctor for evaluation. Sometimes this happens when a parent is concerned about tics or another symptom of Tourette's syndrome; other times it occurs at a regularly scheduled check-up when a person's doctor notices these symptoms during a routine physical examination.

What are the benefits of seeking early treatment of Tourette's syndrome symptoms?

When a child's behavior is viewed as disruptive, frightening, or bizarre, it may provoke ridicule and rejection by uninformed peers, family, teachers or friends. Some people can feel scared or threatened and exclude the child from activities or interpersonal activities and relationships. A child's difficulties in social situations may increase as he or she reaches adolescence. Therefore, it is very important for the child's self-esteem and emotional well-being that treatment be sought as early as possible to avoid these difficulties. Tourette's syndrome alone does not affect the IQ of a child. Many children who have Tourette's syndrome, however, also have learning disabilities and/or difficulties paying attention. Therefore special education is frequently needed for a child with Tourette's syndrome.

What treatments are available for Tourette's syndrome?

Not everyone with Tourette's syndrome is disabled by his or her symptoms and medication may not be necessary. Relaxation techniques and behavioral therapies (often called *habit-reversal training*) may be very useful in the treatment of tics. Many people with Tourette's syndrome may also benefit from psychotherapy (talking therapy) to address some of the self-esteem and self-consciousness issues associated with their illness. Medication treatment of Tourette's syndrome usually focuses on decreasing the severity, frequency, and discomfort of tics for people with significant social and occupational difficulties due to their symptoms.

Through effective treatment of their tics (and other coexisting psychiatric illnesses), the overwhelming majority of people with Tourette's syndrome can expect to see their symptoms decrease and can continue living the lives they want to live.

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