

Tourette's Syndrome

Tourette's disorder, or Tourette's syndrome (TS) as it is frequently called, is a neurologic syndrome. The essential feature of Tourette's are multiple tics that are sudden, rapid, recurrent, non-rhythmic, stereotypical, purposeless movements or vocalizations.

What are the symptoms of Tourette's syndrome?¹

- Both multiple motor and one or more vocal tics are present at some time during the illness, although not necessarily simultaneously
- Occurrence many times a day nearly every day or intermittently throughout a span of more than one year
- Significant impairment or marked distress in social, occupational, or other important areas of functioning.
- Onset before the age of 18²

Symptoms can disappear for weeks or months at a time and severity waxes and wanes.

What are the first tics that may be characteristic of TS?

Usually, the 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 TS. Involuntary sounds, such as throat clearing and sniffing, or tics of the limbs may be an initial sign in other children.

Are any other symptoms associated with Tourette's?

Approximately 50 percent of patients meet criteria for attention deficit hyperactivity disorder (ADHD) and this may be the more impairing problem. Approximately one-third of patients meet criteria for obsessive-compulsive disorder (OCD) or have other forms of anxiety. Learning disabilities are common as well as developmental stuttering. Social discomfort, self-consciousness and depressed mood frequently occur, especially as children reach adolescence.

What causes these symptoms?

Although the cause has not been definitely established, there is considerable evidence that TS arises from abnormal metabolism of dopamine, a neurotransmitter.³ Other neurotransmitters may be involved.

Can TS be inherited?

Genetic studies indicate that TS is inherited as an autosomal dominant gene but different family members may have dissimilar symptoms. A parent has a 50 percent chance of passing the gene to one of his or her children. The range of symptomatology varies from multiple severe tics to very minor tics with varying degrees of attention deficit-disorder and OCD.

Are boys or girls more likely to have TS?

The sex of the child can influence the expression of the TS gene. Girls with the gene have a 70 percent chance of displaying symptoms, boys with the gene have a 99 percent chance of displaying symptoms. Ratios of boys with TS to girls with TS are 3:1.

How is Tourette's syndrome diagnosed?

No blood analysis, x-ray or other medical test exists to identify TS. Diagnosis is made by observing the signs or symptoms as described above. A doctor may wish to use a CAT scan, EEG, or other tests to rule out other ailments that could be confused with TS. Some medications cause tics, so it is important to inform the professional doing the assessment of any prescribed, over-the-counter, or street drugs to which the patient may have been exposed.

What are the benefits of seeking early treatment of TS symptoms?

When a child's behavior is viewed as disruptive, frightening, or bizarre by peers, family, teachers, or friends, it provokes ridicule and rejection. Teachers and other children can feel threatened and exclude the child from activities or interpersonal relationships. A child's socialization difficulties will increase as he 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.

What treatments are available for TS?

Not everyone is disabled by his or her symptoms, so medication may not be necessary. When symptoms interfere with functioning, medication can effectively improve attention span, decrease impulsivity, hyperactivity, tics, and obsessive-compulsive symptomatology. Relaxation techniques and behavior therapy may also be useful for tics, ADD symptoms, and OCD symptoms.

How does TS affect the education of a child or adolescent with TS?

TS alone does not affect the IQ of a child. Many children who have TS, however, also have learning disabilities or attention deficits. Frequently, therefore, special education may be needed for a child with TS. Teachers should be given factual information about the disorder and, if learning difficulties appear, the child should be referred to the school system for assessment of other learning problems.

What is the course of TS?

Some people with TS show a marked improvement in their late teens or early twenties. However, tics as well as ADD and OCD behavior, may wax and wane over the course of the life span.

¹ According to the *Diagnostic and Statistical Manual of Mental Disorders* (4th Edition), or DSM-IV

² This is a change from the former edition, DSM-III-R, that set maximum age of onset at 21 years of age.

³ A biochemical substance that transmits nerve impulses from one nerve cell to another at a synapse.