

Tourette Syndrome

Tourette Syndrome (TS) is a neurodevelopmental disorder that becomes evident in early childhood or adolescence. It is part of the spectrum of tic disorders and is characterized by involuntary motor and vocal tics. Tics most commonly present themselves between ages 2 and 15, with the average being around 6 years old.

Signs & Symptoms

Tics are the sure indication of Tourette Syndrome, and they can range from mild to severe. Tics are classified into two groups, simple and complex. Simple tics are short, quick and repetitive movements that involve a small number of muscle groups, whereas complex tics are distinct, coordinated movements that involve multiple muscle groups. Types of vocal and motor tics experienced by those with Tourette Syndrome include:

- **Simple motor tics** - rapid blinking, shoulder shrugging, nose twitching, facial grimacing.
- **Complex motor tics** - sniffing, head banging, jumping, twisting, obscene gesturing.
- **Simple vocal tics** - throat clearing, grunting, coughing.
- **Complex vocal tics** - using obscene, crude or swear words, repeating others or their own words and phrases.

Causes & Risk Factors

The exact cause of Tourette Syndrome is not known, but it is thought to be caused by a combination of genetics, environmental factors, and brain chemicals or neurotransmitters. A family history of Tourette Syndrome can increase the likelihood of an individual developing the disorder, as well as their sex. Males are three to four times more likely to develop Tourette Syndrome than females.

Diagnosis & Treatment

There is no specific test to diagnose Tourette Syndrome, so diagnosis for each individual is based on their history of symptoms. To be diagnosed, an individual must have both motor tics and vocal tics that occur multiple times a day, almost every day for around year. Their tics also must have been present before the age of 18, must not be caused by other factors such as medication side effects, and must experience changes in location, frequency, type, or severity. Treatment plans are aimed at controlling tics that interfere with daily activities. Treatment commonly consists of a combination of therapy such as psychotherapy, habit reversal training, and deep brain stimulation (DBS), and medications such as Botox injections, attention deficit hyperactivity disorder (ADHD) medications, antidepressants, and other medications that block or decrease the release of dopamine.

Sources – Tourette Association of America: <https://tourette.org/about-tourette/overview/treatment> and Mayo Clinic: <https://www.mayoclinic.org/diseases-conditions/tourette-syndrome/symptoms-causes/syc-20350465>