



Tourette syndrome

Other Names: Gilles de la Tourette syndrome

Tourette syndrome is a neurodevelopmental disorder characterized by persistent vocal and motor tics. It is caused by a combination of genetic and environmental risk factors.

Characteristics of Tourette syndrome

Tourette syndrome is a neurodevelopmental disorder characterized by persistent vocal and motor tics. Tics are uncontrolled sudden physical movements or sounds. For example, shrugging, blinking, kicking, throat clearing, or tongue clicking can be tics. Individuals with Tourette syndrome have both vocal and motor tics that appear in childhood, occur frequently (multiple times a day), and last for at least a year. There must be no identified cause for the tics such as a brain abnormality, seizures or trauma. The average age of onset for Tourette syndrome is 7 years, though tic behaviors may occur between the ages of 2 and 18. Most cases of Tourette syndrome improve or resolve completely by adulthood.

Many, but not all, individuals with Tourette syndrome also have attention, mood, or behavioral disorders such as attention deficit disorder, obsessive compulsive disorder, anxiety or depression. Males are three times as likely to have Tourette syndrome as females. Tourette syndrome is seen world-wide in people of all ethnic backgrounds. It is estimated that 3 out of every 1,000 children in the US between the ages of 6 and 17 years has Tourette syndrome.

Diagnosis/Testing

No specific genetic cause of Tourette syndrome has been identified yet, though research is ongoing. Tourette syndrome is often passed down in families, which indicates that there are genetic factors contributing to the syndrome. Tourette syndrome is thought to be a multifactorial condition meaning that many genetic and non-genetic factors come together to cause the syndrome.

There is no diagnostic test to confirm Tourette syndrome. Individuals are diagnosed based on the presence and duration of tic behavior, age of onset, and by ruling out other possible causes.

Management/Surveillance

Most individuals with Tourette syndrome come to medical attention for treatment of behavior or mood disorders rather than treatment for tics. Some medicines that are used to treat mood and behavior disorders can also help with tics. Other treatment options include behavioral therapy.

Individuals with Tourette syndrome are at a higher risk for mood and behavioral problems. Also, tic behaviors may cause children to be shy, self-conscious or frustrated. On average, children with Tourette syndrome have average IQs though they may need special help in school to help minimize the effects of tics and maximize their ability to learn.

Mode of inheritance

Tourette syndrome is a complex condition, which means that it is caused by a combination of many different factors. These factors can be genetic as well as non-genetic (such as environmental factors). Complex conditions are inherited in a multifactorial pattern. This means that the chance for an individual to develop Tourette syndrome is influenced by the number and type of genetic and non-genetic factors that occur together to which an individual is exposed. In other

words, no single gene, and no single environmental factor cause Tourette syndrome. However, not all of these genetic factors and environmental factors are known.

Risk to family members

The risk or chance of Tourette syndrome occurring in first-degree relatives (brothers, sisters or children) of a person with Tourette syndrome is thought to be between 10% and 15%. However, in some families the risk may be higher or lower. A genetic counselor can look at family histories and help assess the risk of Tourette syndrome.

Resources

National Tourette Syndrome Association

<http://tsa-usa.org>

Genetics Home Reference: Tourette Syndrome

<http://ghr.nlm.nih.gov/condition/tourette-syndrome>

Centers for Disease Control: Tourette Syndrome

<http://www.cdc.gov/ncbddd/tourette/research.html>

National Institute of Neurological Disorders and Stroke: Tourette Syndrome Fact Sheet

http://www.ninds.nih.gov/disorders/tourette/detail_tourette.htm

References

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