

Tourette's Syndrome

Introduction

Tourette's syndrome changes the way the brain controls the body. Children with Tourette's make uncontrollable movements or sounds called tics. Tourette's syndrome happens more often in boys than girls. As people with Tourette's syndrome grow up, the tics may go away. But sometimes they can affect a person's quality of life and ability to communicate.



This reference summary explains Tourette's syndrome. It discusses its symptoms, causes, treatment and complications.

Tourette's Syndrome

Tourette's syndrome is also known as Tourette syndrome. It is named for the doctor who first described the condition, Dr. Georges Gilles de la Tourette. Tourette's syndrome causes people to have tics. Tics are sounds, motions or twitches. A person with tics doesn't have control over them.

People with tics can sometimes control them for a short period of time with great effort. But the tic will come out eventually.

Tics usually begin around age 2 and get worse until age 12 or so. They are less frequent in the late teen years and adulthood. Adults that still have tics usually don't have as many, or they aren't as bad. There is no cure for Tourette's syndrome. But most people with mild symptoms don't need treatment and can lead normal lives.



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Symptoms

Tics are sounds or motions that last for a few seconds to a few minutes. They usually happen in patterns, and other people may not notice them.

Tics can be movements, such as:

- Eye darting.
- Finger flexing.
- Flapping the arms.
- Hopping.
- Jerking the neck.
- Shoulder shrugging.
- Twitching or blinking the eyes.



Tics can also include sounds, such as:

- Yelling.
- Coughing or throat-clearing.
- Repeating words or phrases.
- Using vulgar, obscene or swear words.

Motor tics are motions or movements of the body. Vocal tics are sounds that the person makes. Motor tics often happen earlier on than vocal tics.

People with Tourette's usually feel an urge in some part of the body that builds and builds. This urge is called a premonitory urge. When a premonitory urge happens, performing the tic will release the tension. The person may feel the need to complete a tic a certain number of times or in a certain way to get rid of the urge.



Tics can be simple or complex.

Simple tics are sudden, brief and repetitive. Just one or a few muscle groups are affected. They are usually sudden, brief and meaningless movements. Examples of simple tics include eye blinking or head jerks.

Complex tics affect multiple muscle groups and are more involved. They happen more

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slowly and last longer. Examples include hand gestures and coordinated movements such as throwing a ball.

Tics may:

- Happen often or rarely.
- Bother the person greatly or go largely unnoticed.
- Happen more often or more severely during times of illness, fatigue, stress or anxiety.
- Happen at night while the person sleeps.
- Change over time into other movements.
- Get worse as a person becomes a teenager and improve during adulthood.



Talk with your child's health care provider if your child makes movements or sounds they cannot control. Not all tics happen because of Tourette's syndrome. Tics often happen for weeks or months and then resolve on their own.

Causes and Risk Factors

The exact cause of Tourette's syndrome is not known. There is no known way to prevent it. The syndrome is likely caused by a combination of genetic and environmental factors.

Tourette's syndrome may be an inherited disorder. One genetic mutation, or change, has been identified as a rare cause of Tourette's syndrome.

A family history of tic disorders may make it more likely that the person will develop Tourette's syndrome.



The risk of Tourette's increases for a child if the mother:

- Smoked during pregnancy.
- Drank a lot of coffee or drank alcohol during pregnancy.
- Experienced extreme stress while pregnant.
- Suffered from severe nausea and vomiting in the first trimester.

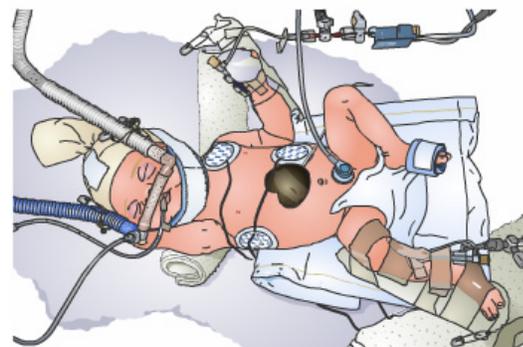
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Other risk factors for Tourette's include:

- Not having enough oxygen or blood supply to the brain during birth.
- Low birth weight and evidence of brain injury.

Some researchers believe that Tourette's is caused by abnormalities in certain brain regions. Tourette's may be caused by abnormalities in:

- The circuits that connect regions in the brain.
- The neurotransmitters that allow nerves to communicate.



A neurotransmitter is a chemical that is made by nerve cells. It is used to communicate with other cells.

Diagnosis

A health care provider can diagnose Tourette's based on your child's medical history, symptoms and a physical exam. The health care provider may want to know if tics are causing school or social problems for your child.

Tourette's syndrome is diagnosed when a person meets certain criteria. A person must have:

- Both motor tics and vocal tics, although not necessarily at the same time.
- Tics that happen several times a day, nearly every day, for more than a year.
- Tics that aren't caused by medications, other substances or another medical condition.
- No break in tics for more than a three-month period.



Additionally, to be diagnosed with Tourette's, the onset of tics must begin before age 18. There are no tests available to find out if your child has Tourette's syndrome. But your health care provider may check for other health problems that have similar symptoms. These may include:

- Blood tests.
- A CT scan or MRI.
- An electroencephalogram, or EEG.

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A CT scan makes a series of detailed pictures of areas inside the body taken from different angles. The pictures are created by a computer linked to an x-ray machine.

An MRI uses a large magnet and radio waves to look at organs and structures inside your body.

An EEG is a recording of electrical activity in the brain. It is made by placing electrodes on the scalp. Impulses are sent to a special machine. An EEG may be used to diagnose brain disorders.

Your health care provider may also check for:

- Attention deficit hyperactivity disorder, or ADHD.
- Learning or behavior problems.
- Obsessive-compulsive disorder, or OCD.

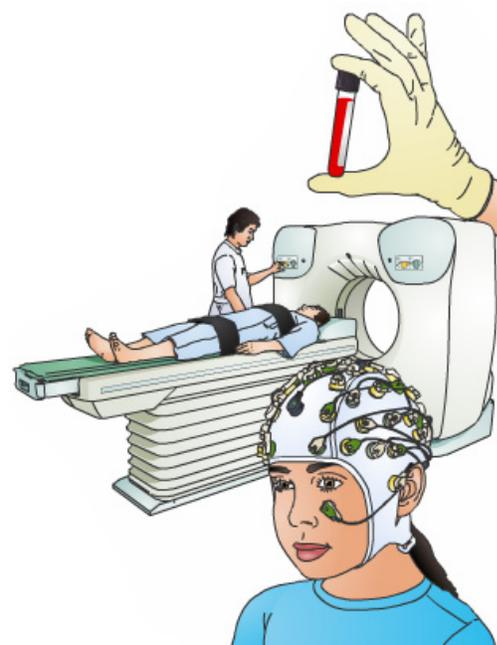
These problems sometimes happen along with Tourette's syndrome.

ADHD is a chronic condition. It can lead to impulsive behaviors, hyperactivity and a short attention span. Children with ADHD may have trouble maintaining healthy relationships and self-esteem. They may also struggle in school. OCD is an anxiety disorder. People with OCD have unreasonable thoughts and fears. This drives them to perform repetitive behaviors.

Treatment

Treatment for Tourette's helps you and your child understand the tics. Your health care provider may help you figure out when and why tics are likely to happen. As your child learns to cope, he or she may feel more in control.

As a parent, you help shape your child's attitude toward the disorder. Keep in mind that your child can't control the tics. You should never punish your child for having tics.



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If you feel frustrated by the tics, try not to show your child how you feel. Your frustration could increase his or her anxiety about the tics and make them worse. Reassure your child by staying calm and helping him or her relax.

Keep track of when your child's tics get worse. You may notice that certain things trigger the tics. You can help your child avoid those things. But tics associated with Tourette's syndrome come and go. It may be difficult to know why they sometimes get worse.

Your child's teachers can help your child while he or she is at school. They can:

- Give your child more time to take written tests.
- Let your child use a computer or recite assignments rather than writing them by hand if tics affect your child's writing.
- Provide a seat for your child where there are few distractions and some privacy.
- Allow for frequent rest periods when needed.
- Allow your child to leave the room if he or she needs to move around or let the tics happen in private.
- Set an example of acceptance. It is important for teachers to prevent other children from teasing your child.
- Provide tutoring or special classes if needed.



No medication completely stops symptoms of Tourette's syndrome. But some medications may help control or minimize tics. They can also reduce symptoms of related conditions, such as ADHD or OCD. Drugs that block the neurotransmitter dopamine in the brain may be used to control tics.

For simple or vocal tics, an injection of Botulinum toxin type A, Botox[®], may help relieve the tic. It is injected into the affected muscle. Stimulant medications are used to help increase attention and concentration for people with ADHD. These include Ritalin[®] and Adderall[®]. Central adrenergic inhibitors may help control behavioral symptoms, such as impulse control problems and rage attacks.

Antidepressants may help control symptoms of sadness, anxiety and OCD. Psychotherapy can help a person cope with Tourette's syndrome, ADHD, obsessions, depression or anxiety.

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Psychotherapy is also known as talk therapy. It teaches people strategies to help them manage their symptoms better and function at their best in everyday life. Habit reversal training is a type of behavior therapy that may help to reduce tics. A person with Tourette's can identify premonitory urges. He or she learns to respond to those urges by moving in a way that prevents the tic from happening.

For severe tics that don't respond to other treatment, deep brain stimulation, or DBS, may help. A medical device is implanted in the brain. The device sends electrical stimulation to targeted areas in the brain that control movement.

Summary

Tourette's syndrome changes the way the brain controls the body. Children with Tourette's make uncontrollable movements or sounds called tics.

The cause of Tourette's syndrome is unknown. Tourette's syndrome happens more often in boys than girls. As people with Tourette's syndrome grow up, the tics may go away. But sometimes they can affect a person's quality of life and ability to communicate.

There is no cure. But you can live a normal life with Tourette's syndrome. Treatment for Tourette's helps you and your child understand the tics. Your health care provider may help you figure out when and why tics are likely to happen. As your child learns to cope, he or she may feel more in control.

As a parent, you help shape your child's attitude toward the disorder. Your frustration could increase his or her anxiety about the tics and make them worse. Reassure your child by staying calm and helping him or her relax.



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