



Tics and Tourette Syndrome

What are tics?

Tics are quick, sudden and involuntary muscle movements (motor tics) or sounds (vocal tics) which cannot be easily controlled. It is common during childhood and typically appear before the age of seven. The frequency and type of tics differ from child to child, and may worsen with stress, anxiety or fatigue. The frequency may drop when your child is concentrated on an activity such as reading a book or playing a video game, and it is uncommon during sleep.



Children with tics typically describe an uncomfortable urge or sensation such as an itch, a tingle or tension, which goes away after the tic is expressed. Although some children can hold back their tics temporarily, this is often followed by an overwhelming urge to express the tic.

As many as 20% of children may have tics and it is three times more likely to develop in boys than girls.

Tics may be simple:

Motor	Vocal
<ul style="list-style-type: none">• Eye blinking• Face grimacing• Shoulder shrugging• Head jerking	<ul style="list-style-type: none">• Throat clearing• Grunting• Sniffing• Barking

Or complex:

Motor	Vocal
<ul style="list-style-type: none">• Jumping• Hopping• Touching• Squatting• Hand gestures	<ul style="list-style-type: none">• Repeating what someone else says• Repeating one's own words• Involuntary use of foul language

Children who have tics are usually normal and bright. However, tics may have a negative impact on children who are shy or overly self conscious. Adults may worsen a child's social embarrassment by commenting on the tics or punishing the child for the movements.

What causes tics?

The cause of tics is unknown. It is likely caused by inherited biochemical differences in the brain.

Flurries of tics may reflect emotional tension in your child.

What is the expected course?

Transient tics tend to disappear over time, usually within two months to a year. Otherwise, it often improves or disappears during adolescence. Approximately 3% of children with tics may develop incapacitating tics which affect their everyday life.

What is Tourette Syndrome?

Tourette Syndrome (TS) is a complex neuro-behavioural disorder that involves motor or sound tics. TS is also known as Gilles de la Tourette syndrome, which is named after the neurologist who first described the syndrome in 1885.

TS is common in children. About one to ten out of every 1,000 children or adolescents have TS.

Children with TS tend to:

- Have trouble paying attention
- Have high activity levels
- Have difficulty controlling impulses
- Display obsessive compulsive behaviours
- Have learning problems
- Display behavioural issues
- Be anxious or sad
- Have sleep problems

How is TS diagnosed?

There are no special tests to determine if your child has TS.

The criteria used to diagnose TS are:

- The tics must start before the child is 21 years old.
- The tics must be present for at least 12 months.
- The child must have two or more motor tics and one or more vocal tics. Some children with TS express both types of tics simultaneously, while others exhibit motor tics and vocal tics at separate times.
- The tics must come and go.

There must not be other medical causes for tics.

What causes TS?

The exact cause is unknown. It is likely due to a combination of genetic and environmental factors. It may also be caused by a problem with the chemicals in the brain that control movement.

What do I need to take note of?

Your child may face problems in school or with social activities because:

- Tics may affect motor activities or talking which can be disruptive or draw unwanted attention.
- There may be pain or discomfort in the muscles (e.g. neck) due to movements caused by tics.
- He/she may feel embarrassed when others see or copy his/her tics.
- He/she may also have attention deficit hyperactive disorder leading to high activity levels, and trouble paying attention or controlling their urges.
- He/she may have learning problems.

- He/she may also have obsessive-compulsive behaviour, where he or she may need to do their work in a specific way or repeat an activity a certain number of times.
- He/she may require extra time to complete tests.
- He/she may have anxiety or depression.

How can I help my child?

You can support your child by:

1. Helping him/her to relax.

Tics may be a barometer of tension. Make sure your child has free and fun time every day. If your child's schedule is packed with activities, try to lighten his/her commitments. If your child is unduly self critical, praise him/her more and help him/her to moderate his/her own expectations.

2. Identifying and removing specific environmental stresses.

Whenever your child has a flurry of tics, record the episode in a diary, detailing the date, time, and preceding event. From this diary, you can begin to identify triggers. [Note: It is important that your child does not know that you are keeping this diary].

In general, criticise your child less – whether it is about grades, music lessons, sports, keeping his/her room clean,

table manners and so on – and build up his/her self-esteem. Avoid stimulant medications such as decongestants, which can lower the threshold of tics.

3. Ignoring tics when they occur.

When your child is having tics, do not call his/her attention to them. Reminders imply that they are bothering you. If your child becomes self-conscious or upset about his/her own tics, this may worsen its severity.

Inform your family, his/her friends and teachers to ignore the tics.



4. Not talking about tics.

Stop having conversations about tics in front of your child. The less is said about tics, the less your child will be apprehensive of them. If your child brings up the subject, say something reassuring such as “Eventually your facial muscles will learn to relax and the tics will go away.”

5. Not reprimanding your child for his/her tics episodes.

Some parents mistakenly believe that tics are bad habits that can be broken. Your child should not be reprimanded or forced to control the tics as this may worsen his/her condition.

Will my child recover from TS?

The goal of TS treatment is to limit interference to your child’s everyday activities and functioning, and help him/her live as fully and normally as possible. It is important to educate your child as well as those around him/her about TS (e.g. your child’s teachers, classmates and friends). Your child’s doctor will be able to advise on relevant treatment options depending on the severity of your child’s condition.

Your child may need medication if the tics are affecting his/her school or daily social activities, or result in physical harm to self and others. Low anti-dopaminergic doses of certain medications, also known as neuroleptics (e.g. risperidone) may be prescribed. Other common medications used include clonazepam, clonidine, guanfacine and aripiprazole. The lowest dosage of these drugs should be used. These medicines, which block chemicals in the brain, should be avoided if the tics are not causing problems.

Behavioural treatment may also be helpful in controlling the tics and addressing coexisting problems such as attention deficit hyperactivity disorder or obsessive-compulsive disorder. Children with TS should get ample rest as the lack of sleep may lead to an increase in tics frequency. Medicines that are used to treat attention problems, like methylphenidate and dextroamphetamine, usually do not make tics worse.

About the National University Centre for Women and Children

National University Centre for Women and Children (NUWoC) is a national university specialist centre that aims to empower women, children and their families to lead healthier lives. We provide comprehensive medical and surgical services ranging from pre-conception to child and maternal health.

NUWoC comprises the Department of Obstetrics & Gynaecology (O&G) and Khoo Teck Puat – National University Children's Medical Institute (KTP-NUCMI) of National University Hospital. It focuses on the right-siting of appropriate services in the community and builds complementary services in National University Health System's (NUHS) centres of excellence – Ng Teng Fong General Hospital and Alexandra Hospital.

Through a generous gift from the Estate of Khoo Teck Puat, KTP-NUCMI established an integrated outpatient facility with medical, diagnostic and rehabilitation services for children. We are also the only public specialist centre in Singapore that offers paediatric kidney and liver transplant programmes.

For more information about us, visit www.nuh.com.sg/NUWoC

Children's Emergency (24-hr)

Location NUH Main Building, Zone F, Level 1
Contact +65 6772 5000

KTP-NUCMI

Location NUH Main Building, Zone E, Level 2
(Accessible via Kent Ridge Wing, Zone C, Level 2, Lift Lobby C)
Operating Hours 8.30am – 5.30pm (Mon to Fri), 8.30am – 12.30pm (Sat)
General Enquiry +65 6772 5736
Appointment Line +65 6908 2222
Email ktpnucmi_appt@nuhs.edu.sg

9a Viva-University Children's Cancer Centre

Location NUH Medical Centre, Zone B, Level 9
Operating Hours 8am – 5.30pm (Mon to Fri)
Appointment Line +65 6772 5030
Email cbccappt@nuhs.edu.sg

NUH Children's Urgent Care Clinic @ Bukit Panjang

Location Junction 10, #01-22
Operating Hours 9am – 11pm daily (including public holidays)
General Enquiry +65 6219 1538
Email childreucc@nuhs.edu.sg

NUH Child Development Unit @ JMC

Location Jurong Medical Centre, Level 2
Operating Hours 8.30am – 5.30pm (Mon to Fri)
Appointment Line +65 6665 2530 / 2531
Email cdu@nuhs.edu.sg

NUH Child Development Unit @ Keat Hong

Location Keat Hong Community Club, #03-01
Operating Hours 8.30am – 5.30pm (Mon to Fri)
Appointment Line +65 6769 4537/4637
Email cdu@nuhs.edu.sg

Clinic A22 NUWoC Children's Clinic @ NTFGH

Location Ng Teng Fong General Hospital
Tower A – NTFGH Clinics, Level 2
Operating Hours 8.30am – 5.30pm (Mon to Fri)
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