Tourettes action

MEDICAL OPTIONS FOR TOURETTE SYNDROME

BEHAVIOURAL THERAPIES ARE KEY TO TREATING TOURETTE SYMDROME, BUT MANY PEOPLE MAY ALSO BENEFIT FROM MEDICATION. THIS FACTSHEET EXPLAINS THE DIFFERENT TYPES OF MEDICATION THAT MAY BE AVAILABLE TO YOU.

Healthcare professionals will often suggest educational and behavioural therapies as the first option for helping to control tics caused by Tourette syndrome (TS). However, when these techniques aren't working for you or there's reasons why you can't access these therapies, treatment with medication may be useful. What's more, medication can be used alongside behavioural therapy or on its own, so there are different options to suit your needs.

WHAT TO EXPECT WHEN STARTING MEDICATION

There are no medications that are licensed for TS, licensing is what allows medications to be advertised for a certain use. There are, however, mediations that research tells us can be effective in treating the symptoms of TS. Medication has been shown to reduce tics by about half, but this varies from person to person, so not everyone will see an improvement. Also, it's important to bear in mind that all medications have the potential to cause unwanted side effects. It's worthwhile discussing these in detail with a healthcare professional before starting any new medication.

People can respond differently to different medications, so you may need to try more than one before finding the one and the dose that works best for you. Some medications need to be started slowly and increased gradually to see how well they work and whether any side effects occur. If a medication isn't helpful, it may also need to be reduced slowly before stopping. This means that each trial can take several weeks or even months. If you choose to try medication, it's important to be patient and stay open to trying different options, even if the first one doesn't help.

Treatments for TS should be tailored to your specific needs keeping in mind what other conditions you may also have such as tics and attention deficit hyperactivity disorder (ADHD) or tics and obsessive-compulsive disorder (OCD).

Any changes to treatment or medication should always be discussed with a healthcare professional.

WHAT ARE CLINICAL GUIDELINES?

Clinical guidelines are documents used by healthcare professionals to help make decisions about how to treat their patients. The European Society for the Study of Tourette Syndrome (ESSTS) published the first European clinical guidelines for TS in 2011, followed by an updated version in 2021. The guidelines are based on up to date research studies of available medications as well as the opinions of TS experts.

MEDICATIONS SUPPORTED BY CLINICAL GUIDELINES

DOPAMINE-MODULATING MEDICATIONS

The cells in your body use a chemical called dopamine to communicate with your brain. When you have TS, it's thought that you may have an imbalance in the amount of dopamine in your brain or that your brain cells are too sensitive to dopamine.

Medications that alter how dopamine works, known as dopamine-modulators, are commonly used to treat TS, and they have been used for many years to manage the condition. Dopamine-modulators for TS include **antipsychotics** and **benzamides.**

WHAT ARE ANTIPSYCHOTICS?

Antipsychotics are commonly used to treat people with psychosis (a condition where people lose contact with reality and have symptoms such as hallucinations), but they can also be helpful for other conditions involving the brain. When antipsychotics are used to treat tics, they're usually prescribed at much lower doses than other conditions.

NAME	ARIPIPRAZOLE	RISPERIDONE	TIAPRIDE
PRONOUNCED	*AR-i-PIP-ra-zole*	*ris-PER-i-done*	*TEE-ah-PRIDE*
MEDICATION TYPE	Antipsychotic	Antipsychotic	Benzamide
WHAT IS KNOWN ABOUT THIS MEDICATION:	The most prescribed medication for TS, with a lower risk of side effects (such as weight gain) compared to older antipsychotics. Several studies indicate it can reduce tics. It may also reduce depression, anxiety and self aggression in adults. However, some people may find it makes them feel restless or have problems with sleep when it if first started.	One of the best studied antipsychotics for the treatment of TS, with several studies proving its effectiveness in reducing tics. Weight gain, trouble sleeping and drowsiness are common side effects. It can also cause an increase in the levels of prolactin (a reproductive hormone) in the body, however, this would be monitored regularly by your doctor.	Commonly prescribed for TS in Europe, however there is less evidence from research studies compared to antipsychotics. Common side effects are dizziness, nausea and dry mouth. Tremors, stiff muscles and restlessness are rare, but can happen when treatment is first started or with missed doses.

Haloperidol (HAL-oh-PER-i-dol) and **pimozide** (PIM-oh-zide), are older antipsychotics that are only used for severe tics or if you have not seen improvements with other treatments. These older medications have a greater risk of side effects, such as agitation, lack of motivation, heart problems and movement problems (tremors and stiffness), drowsiness, dizziness and weight gain. Signs of these will be monitored closely by your medical team, and the risk of them will be weighed up against improvements in your tics.

NORADRENERGIC MEDICATIONS

Noradrenaline is another type of chemical messenger that everyone has in their brain, but when you have TS it seems to play a part in causing tics.

Although research studies have not yet discovered exactly why noradrenaline causes tics, treatment called noradrenergic medications can help to reduce them. Noradrenergic medications are more commonly prescribed for children and young people than for adults and are often prescribed for people who have TS and ADHD.

NAME	CLONIDINE	GUANFACINE
PRONOUNCED	KLOE-ni-deen	GWAHN-fa-seen
MEDICATION TYPE	alpha-2 agonist	alpha-2 agonist
WHAT IS KNOWN ABOUT THIS MEDICATION:	Tends to be more effective in children with tics and ADHD compared to people with tics who do not have ADHD. Shown to be effective in children and young people where dopamine-modulating medications have not been effective or have caused too many side effects. Side effects of clonidine include low blood pressure, low heart rate and drowsiness. People taking this medication usually need some extra monitoring of their blood pressure and heart health.	May reduce tics and improve ADHD symptoms in children and young people with TS, but not all research studies have found this to be the case. The most common side effects of guanfacine are drowsiness, headache, fatigue, dizziness, irritability, abdominal pain and nausea. The side effects usually improve over time.

OTHER TYPES OF MEDICATIONS

CANNABIS-BASED MEDICATIONS

There is growing interest in cannabis-based medicines for TS, and several small research studies in adults suggest that they may help reduce tics and improve related symptoms such as ADHD or anxiety. These studies have mostly used specially developed medications that interact with the body's internal cannabis signalling system (called the endocannabinoid system) and not recreational cannabis. Further, large, high-quality studies are still lacking. This means we don't yet fully understand how effective or safe these treatments are, especially for children and young people.

Importantly, there is no evidence that smoking cannabis helps with tics. In fact, using cannabis recreationally – especially in adolescence and young adulthood – can have negative effects on mental health, memory and motivation.

In the UK, cannabis is a Class B drug under the Misuse of Drugs Act 1971, which means it is illegal to possess or use it without a prescription. Some cannabis-based products are legally approved for medical use in the UK, but at the time of writing (June 2025), these are not approved for use in TS.

BOTULINUM TOXINS

There is some evidence that botulinum toxin injections (commonly known as 'botox') can treat reduce tics by temporarily weakening the muscles involved in the tic.

In Europe, botulinum toxin treatment is generally reserved for adults and older teenagers who haven't responded well to other treatments. It may be helpful for both motor and vocal tics, but it's only suitable for very specific tics. This is because the injections temporarily weaken the targeted muscle, using botulinum toxin in too many areas could interfere with important everyday movements – like blinking, swallowing or speaking – depending on where it's used. That's why it's usually targeted at one or two tics at a time. Potential side effects include soreness and mild muscle weakness or changes to your voice when used to treat vocal tics.

ANTI-EPILEPTIC MEDICATIONS

Topiramate *(toe-PIR-a-mate)* may be prescribed for people with TS when other treatments have not been effective.

It's not known exactly how this medication works, but there is some promising evidence of its effectiveness from a collection of studies in people in China. Side effects can include thinking and language problems, mood swings, pins and needles, nausea, sweating and reduced appetite.

SUMMARY

Although behavioural therapy is key to treating tics, some people living with TS may benefit from medication to help control them. Antipsychotics, particularly aripiprazole, are the most common medications prescribed for TS, but there are several treatment options available. Your treatment should be tailored to your specific needs, so it's important to discuss these with your healthcare professional so they can help find a treatment that suits you best. Remember, it's important to discuss the pros and cons of any new medication so you're prepared for potential side effects and how to manage them. Not all medications are effective in all people, so you may need to try different medications to find the one that works for you.

Always talk to a healthcare professional before making any changes to your medications.

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