

# Executive functioning



Tourette Syndrome is a complex condition and is associated with other neurodevelopmental conditions including ADHD and Autism spectrum disorders. A misunderstood area of neurodevelopmental disorders and a common barrier to learning is known as executive functioning difficulties. There is a good evidence base to indicate that people with Tourette Syndrome often have difficulty with executive functioning.

## What is executive functioning?

The executive functions are a group of behaviours that facilitate tasks and independence. They also impact on a person's ability to regulate their behaviours and responses. People of all abilities can have executive functioning difficulties.

Executive functioning falls into a set of mental skills that include three main areas:

- **Working memory** (keeping information in mind and putting it to use)
- **Flexible thinking** (see problems from multiple angles and find different ways to solve them)
- **Self-control** (ability to stop before you respond on impulse)

We use these skills every day to learn, work and manage everyday life. Difficulties with executive functioning can make it hard to focus, follow instructions, regulate emotions etc.

## How does this affect children? What can this look like in school?

- Paying attention and focussing
- Monitoring your own performance during a task
  - for example checking work and spotting mistakes

- Starting and completing new tasks and independently generate new ideas
- Ability to shift focus from one situation/task/activity to another as needed
- Ability to control impulses and stop a behaviour at an appropriate time
- The capacity for holding onto information in the mind (working memory)
- Organisational skills – such as keeping a workspace organised. This could be a school bag, homework folder, desk etc.
- Use of planning skills – setting goals, planning steps and carrying out tasks systematically

## How can we help improve children's executive functioning?

Looking all the different executive functions, it is easy to understand why executive functioning difficulties impact on progress for children in school, and this has been shown to be the case. Difficulties also impact on self-esteem and anxiety as they can be misunderstood as laziness or carelessness.

The ways to support children with executive functioning difficulties are varied as strategies depend on the area/s which need support as well as the age of the child (executive functioning skills develop in all children as they get older). However, it is helpful for teachers, parents and carers to consider the types of interventions that can help.

It is also helpful for children and young people with Tourette Syndrome to become curious about their own strengths and challenges and to begin to learn strategies which can be helpful in supporting their growing independence. What is often most helpful is to be curious with children about what works for them and to help them spot when they find a technique helpful so that they can use it again.

**Possible strategies for supporting executive functioning difficulties in schools**  
(some of which can also be used at home)

Area of executive function	Possible strategies for support
Controlling impulses	<p>This is particularly tricky for children with TS and ADHD.</p> <ul style="list-style-type: none"> <li>• Support can include sensory support (e.g. fiddle toys, sensory cushions, lap pads etc).</li> <li>• Movement breaks during tasks.</li> <li>• Practising tolerating urges using fun games such as resisting chewing a sweet.</li> <li>• Taking turns to play games.</li> <li>• Showing compassion and valuing of the fast-acting brain to support self-esteem and self-awareness.</li> <li>• Social skills support.</li> </ul>
Switching Attention	<ul style="list-style-type: none"> <li>• Warnings about endings of activities including visual support (e.g. timer).</li> <li>• Now and Next approaches which help the child to prepare for what is coming next.</li> <li>• Reducing distractions such as background noise.</li> <li>• Presenting activities in stages.</li> <li>• Allowing reasonable adjustments to support concentration during listening (e.g. doodle pad, fiddle toy).</li> <li>• Using a particular signal to indicate the need to switch attention (e.g. 'are we listening?' with clapping).</li> </ul>
Starting tasks	<ul style="list-style-type: none"> <li>• Provide clear instructions with visual support.</li> <li>• Remind about the first thing to do and ask child to repeat it.</li> <li>• Ensure the task feels manageable – for example in small steps and with clear structure.</li> <li>• Let the child know that you will return to them in a set time period (e.g. use a timer).</li> <li>• Provide opportunities for the child to discuss their ideas with a talking partner for more imaginative tasks (e.g. writing a poem) before starting.</li> </ul>
Working memory	<ul style="list-style-type: none"> <li>• Provide clear instructions that build on consolidated knowledge.</li> <li>• Build automatic knowledge to reduce working memory demands (e.g. number bonds and tables facts).</li> <li>• Teach list making and note taking.</li> <li>• Other strategies for remembering information such as rhymes.</li> <li>• Pre-teaching and repetition.</li> <li>• Visual support around the room and for particular tasks to act as reminders.</li> <li>• Highlighting key information (e.g. the numbers in maths word problems).</li> <li>• Adult support to repeat information when needed.</li> </ul>
Planning	<ul style="list-style-type: none"> <li>• Use of visual strategies such as mind-maps and bullet points.</li> <li>• Provide additional structure such as a writing frame to support a story.</li> <li>• Use technology (e.g. setting reminders on a phone).</li> </ul>

Self-monitoring and work completion	<ul style="list-style-type: none"><li>• Give practise of monitoring activities such as checking some writing for punctuation.</li><li>• Use fun activities such as 'spot the difference' games and 'Where's Wally?' to encourage looking for detail.</li><li>• Make sure that the task is manageable and that the child feels there is time for self-monitoring.</li><li>• Provide opportunities for monitoring small parts of an activity.</li><li>• Help the child to allow themselves brain breaks/ movement breaks when needed.</li><li>• Reward effort and persistence.</li></ul>
Organisation	<ul style="list-style-type: none"><li>• Visual timetables to prompt what is needed each day for school.</li><li>• Prompts and reminders.</li><li>• Good modelling of organisational skills from others.</li><li>• Discussion about how an activity can best be organised.</li><li>• Help the child to find a good time and space for working.</li><li>• Labelled drawers, sectioned folders etc.</li><li>• Good routines (e.g. getting bag packed for school before bed).</li></ul>



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**Find more information here:** <https://developingchild.harvard.edu/resources/activities-guide-enhancing-and-practicing-executive-function-skills-with-children-from-infancy-to-adolescence>