

Executive Function Activities for Adolescents

During adolescence, executive function skills are not yet at adult levels, but the demands placed on these skills often are. Teenagers need to communicate effectively in multiple contexts, manage their own school and extracurricular assignments, and successfully complete more abstract and complicated projects. Here are some suggestions for helping teens practice better self-regulation throughout the daily challenges they face.

Goal setting, planning and monitoring

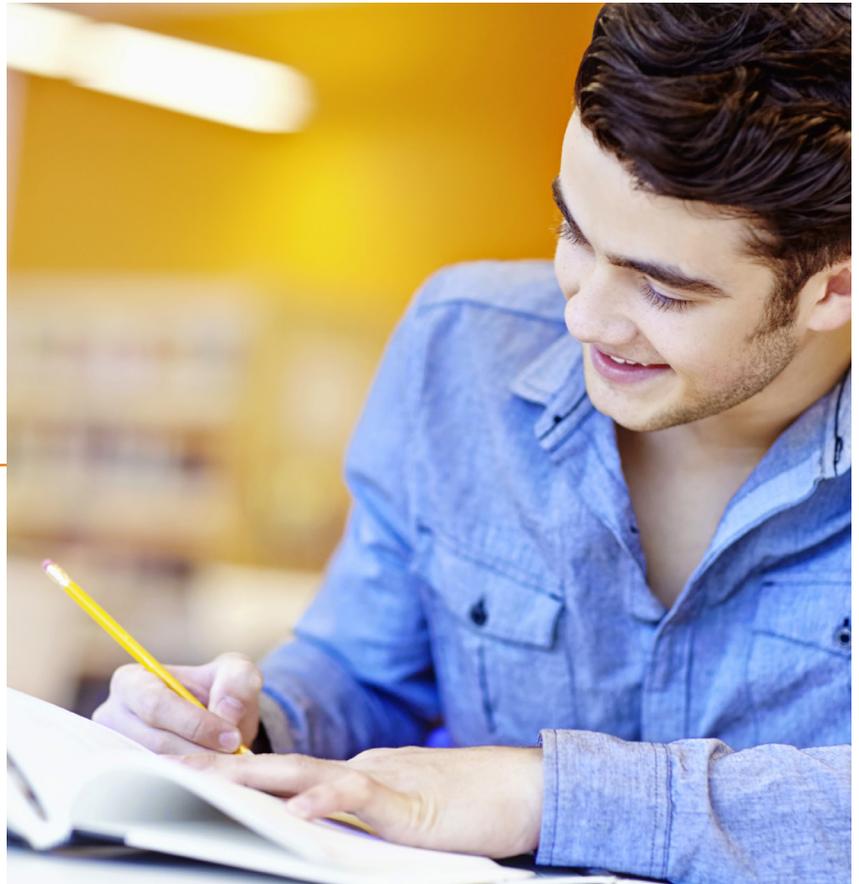
Self-regulation is necessary in any goal-directed activity. Identifying goals, planning, monitoring progress, and adjusting behavior are important skills to practice.

■ **To focus the planning process**, encourage teens to identify something specific that they want to accomplish. Most important is that the goals are meaningful to the teen and not established by others. For some teens, planning the college application process may be self-motivating, but for others, planning a social event may be more important. Start with something fairly simple and achievable, such as getting a driver's license or saving money to buy a computer, before moving on to longer-term goals like buying a car or applying to colleges.

■ **Help teens develop plans** for steps to reach these goals. They should identify short- and long-term goals and think about what has to be done to achieve them. For example: If teens want their team to win the sports championship, what skills do they need to learn? How might they practice them? Identify some problems that might arise, and encourage the teen to plan ahead for them.

Tools for self-monitoring

■ **Self-talk is a powerful way** to bring thoughts and actions into consciousness. Examples include having teenagers talk themselves through the steps of a difficult activity or periodically pausing for a mental play-by-play narrative of what is happening. When occasions



■ **Taking on large social issues**, such as homelessness, domestic violence, or bullying can be both appealing and overwhelming to teens. *DoSomething.org* and *Volunteer-Match.org* can help identify concrete actions.

■ **Remind adolescents to periodically monitor their behavior** and consider whether they are doing the things they planned and whether these plans are achieving the goals they identified. “Is this part of the plan? If not, why am I doing it? Has something changed?” Monitoring in this way can identify counter-productive habitual and impulsive actions and maintain focused attention and conscious control.

arise that provoke strong negative emotions or feelings of failure, self-talk can help adolescents identify potentially problematic thinking and behavior patterns.

■ **Encourage self-talk that focuses on growth.** Help teens recognize that an experience—particularly a failure—can offer lessons, and need

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not be interpreted as a final judgment on one's abilities. For example, when a sports team loses a game, help a discouraged team member to consider what went wrong and what he or she might do to improve next time—rather than simply deciding the team lacks any skills. The same thinking can be helpful for school assignments. Carol S. Dweck, a professor at Stanford University who researches mindsets, has developed a website with more suggestions.

■ **Help adolescents be mindful of interruptions** (particularly from electronic communication such as email and cell phones). Multitasking may feel good, but there is strong evidence that it saps attention and impedes performance. If two (or more) tasks are competing for attention, discuss ways to prioritize and sequence.

■ **Understanding the motivations of others** can be challenging, particularly when people are driven by different perspectives. Encourage teens to identify their hypotheses about others' motivations and then consider alternatives. "Why do you think she bumped into you? Can you think of another explanation?" Teens who are not used to this kind of thinking may need you to model the process: "Could it be that she didn't see you?"

■ **Writing a personal journal** can foster self-reflection by providing teens a means with which to explore thoughts, feelings, actions, beliefs, and decisions. There are many ways to approach journaling, but all encourage self-awareness, reflection, and planning (see websites at end of this section).

Activities

There are many activities that teens may enjoy that draw on a range of self-regulation skills. The key is a focus on continual improvement and increasing challenge. Some examples follow, below:

■ **Sports** — The focused attention and skill development inherent in competitive sports draw on the ability to monitor one's own and others' actions, make quick decisions, and respond flexibly to play. Ongoing, challenging aerobic activity can also improve executive function.

■ **Yoga and meditation** — Activities that support a state of mindfulness, or a nonjudgmental awareness of moment-to-moment experiences, may help teens develop sustained attention, reduce stress, and promote less reactive, more reflective decision-making and behavior.

■ **Music** — Working memory, selective attention, cognitive flexibility, and inhibition are challenged while developing skills in playing a musical instrument, singing, or dancing—particularly when dealing with complicated pieces that involve multiple parts, sophisticated rhythms, and improvisation.

■ **Theater** — A performance is carefully choreographed and requires all participants, on stage and backstage, to remember their jobs, attend to their timing, and manage their behavior. For actors, learning the lines and actions of a role draw heavily on attention and working memory.

■ **Strategy games and logic puzzles** — Classic games like *chess*, as well as computer-based training programs like *Cogmed* and *Lumosity*, exercise aspects of working memory, planning,



and attention. Mensa, the high IQ society, holds a yearly competition testing new games and has an interesting list of strategy games.

■ **Computer games** can also be valuable, as long as time limits are established and observed. Games that require constant monitoring of the environment and fast reaction times challenge selective attention, monitoring, and inhibition. Moving through complicated imaginary worlds, such as those found in many computer games, also challenges working memory. Common Sense Media, a non-partisan media information source, provides some good reviews of popular games.

Study skills

In school, adolescents are expected to be increasingly independent and organized in their work. These expectations can place a large load on all aspects of executive function. Basic organization skills can be very helpful in this regard. The list below can serve as a guide for teens to use.

- **Break a project down** into manageable pieces.
 - **Identify reasonable plans** (with timelines) for completing each piece. Be sure that all steps have been explicitly identified and ensure that the completion of each step is recognized and celebrated.
 - **Self-monitor while working.** Set a timer to go off periodically as a reminder to check on whether one is paying attention and understanding. When you don't understand, what might be the problem? Are there words you don't know? Do you know what the directions are? Is there someone you can ask for help? Would looking back at your notes help? If you have stopped paying attention, what distracted you? What might you do to refocus? Identify key
- times to self-monitor (e.g., before handing in an assignment, when leaving the house, etc.).
- **Be aware of critical times for focused attention.** Multitasking impedes learning. Identify ways to reduce distractions (e.g., turn off electronics, find a quiet room).
 - **Use memory supports for organizing tasks.** Mnemonic devices can be powerful tools for remembering information. Developing the habit of writing things down also helps.
 - **Keep a calendar** of project deadlines and steps along the way.
 - **After completing an assignment,** reflect on what did and did not work well. Develop a list of things that have supported focused and sustained attention as well as good organization, memory and project completion. Think about ways to ensure that these supports are in place for other projects.
 - **Think about what was learned** from assignments that were not completed well. Was this due to a lack of information, a need to improve certain skills, bad time management, etc.? What would you do differently next time?

Resources

Journaling with teens – some supports

- extension.missouri.edu/p/GH6150
- www.cedu.niu.edu/~shumow/iit/doc/journal-writing.pdf

Carol S. Dweck's work on mindsets

- mindsetonline.com/changeyourmindset/firststeps/index.html

Common Sense Media

- www.commonsensemedia.org
- www.commonsensemedia.org/game-reviews

List of winning games from American Mensa's Mind Games competitions

- mindgames.us.mensa.org/about/winning-games/

Other programs

- www.cogmed.com
- www.lumosity.com

Stress management suggestions

- www.mindinthemaking.org/wp-content/uploads/2014/10/PFL-school-age-stress-management.pdf