

## Key Concepts

# Executive Function & Self-Regulation

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**Executive function and self-regulation** skills are the mental processes that enable us to plan, focus attention, remember instructions, and juggle multiple tasks successfully. Just as an air traffic control system at a busy airport safely manages the arrivals and departures of many aircraft on multiple runways, the brain needs this skill set to filter distractions, prioritize tasks, set and achieve goals, and control impulses.

**When children have opportunities to develop executive function and self-regulation skills, individuals and society experience lifelong benefits.** These skills are crucial for learning and development. They also enable positive behavior and allow us to make healthy choices for ourselves and our families.

**Executive function and self-regulation skills depend on three types of brain function: working memory, mental flexibility, and self-control.** These functions are highly interrelated, and the successful application of executive function skills requires them to operate in coordination with each other.

- **Working memory** governs our ability to retain and manipulate distinct pieces of information over short periods of time.
- **Mental flexibility** helps us to sustain or shift attention in response to different demands or to apply different rules in different settings.
- **Self-control** enables us to set priorities and resist impulsive actions or responses.

**Children aren't born with these skills—they are born with the potential to develop them.** If children do not get what they need from their relationships with adults and the conditions in their environments—or (worse) if those influences are sources of [toxic stress](#)—their skill development can be seriously delayed or impaired. Adverse environments resulting from [neglect](#), abuse, and/or violence may expose children to toxic stress, which disrupts [brain architecture](#) and impairs the development of executive function.

**Providing the support that children need to build these skills at home, in early care and education programs, and in other settings they experience regularly is one of society's most important responsibilities.** Growth-promoting environments provide children with “scaffolding” that helps them practice necessary skills before they must perform them alone. Adults can facilitate the development of a child's executive function skills by establishing routines, modeling social behavior, and

creating and maintaining supportive, reliable relationships. It is also important for children to exercise their developing skills through activities that foster creative play and social connection, teach them how to cope with stress, involve vigorous exercise, and over time, provide opportunities for directing their own actions with decreasing adult supervision.

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