

Tip Sheets

Specific Strategies to Support the Development of Executive Function Skills in Infants and Toddlers: 6 to 18 Months



Executive function skills are mental processes that help a person successfully plan, focus, remember, and juggle multiple tasks by filtering

distractions, prioritizing tasks, setting and achieving goals, and controlling impulses. These skills are crucial for learning and development and enable positive behavior and self-regulation. Executive function skills rely on three types of brain function:

1. Self-control (inhibitory control)
2. Working memory
3. Cognitive (mental) flexibility

These functions are highly dependent on each other, and the successful application of executive function skills requires them to operate together.

Inhibitory Control

Inhibitory control is the ability to master thoughts and impulses in order to resist temptations, distractions, and actions. This includes:

- Attention—Focus despite distractions
- Persistence—Remain on a task and complete despite frustration or temptation
- Self-control—Think before acting in order to control behavior, responses, and language
- Effortful control—Suppress one response in order to do another
- Self-regulation—Regulate emotions

Working Memory

Working memory governs our ability to retain information over periods of time and use it to accomplish something. This includes:

- Object permanence—Remember people or things even after no longer seen
- Long-term memory—Remember familiar routines and phrases over time

Cognitive Flexibility

Mental flexibility is the ability to easily and quickly switch perspectives of the focus of attention, adjust to changes in demands or priorities, and apply different rules in different settings. This includes the ability to think about new ways to solve problems.

Strategies for Development: 6 to 18 Months

Children are not born with executive function skills. They are, however, born with the potential to develop them. This development is aided by healthy relationships with adults and positive environmental conditions. Adverse environments resulting from neglect, abuse, and/or violence may expose children to stress, which impairs the development of executive function.

It is important to provide support for children in early care and education programs, at home, and in other settings. Adults can facilitate executive function development by establishing routines, modeling appropriate behavior, and creating and maintaining supportive, reliable relationships.

Children can strengthen their developing skills through particular activities that foster creative play and social connection, teach them how to cope with stress, involve vigorous exercise, and provide opportunities for directing their own actions and decisions with decreasing supervision.

In using these activities, caregivers should pay attention to the child's interests and select activities that are enjoyable and allow the child to determine how long to play.

Lap Games and Hiding Games

These activities exercise working memory, provide practice of basic self-control, and anticipation of a surprise.

- Peek-a-Boo
- Pat-a-Cake
- This is the Way the Farmer Rides
- Show and then hide a toy under a cloth and encourage infant to look for toy.
- Gradually increase the challenge by hiding the toy without first showing.
- Encourage older infants to hide and then loudly search for them so they can track your movements.

Imitation/Copying Games

Infants love to imitate adults. When they imitate, they have to keep track of your actions, remember them, wait their turn and then recall what you did. In doing so, they practice attention, working memory and self-control. This can include:

- Making simple gestures (such as waving)
- Organizing toys in certain ways and asking children to copy you
- Building simple structures by putting one block on top of another and perhaps knocking them down to rebuild.
- Demonstrating ways to play with toys, such as making a toy horse gallop or rocking a baby doll, which introduces the concept of using toys as symbols for real objects.

Simple Role Play

Older infants and toddlers enjoy doing the tasks they see adults do. Take turns with any activity that interests the child, such as sweeping the floor, picking up toys, dusting, etc. These games

introduce the basics of imaginary play and practice working memory, self-control, and selective attention because the toddler must hold the activity in mind to complete it while avoiding distractions and inhibiting impulsive actions.

As they get older children can remember and play out roles that are more complicated. They will also begin to initiate activities. Providing the necessary materials, such as a broom and a dust cloth, can help children enjoy and sustain this type of play.

Finger Plays

Songs or chants, such as *Itsy-Bitsy Spider*, with simple hand motions are fun for infants and help develop self-control, working memory, and language. Infants can learn to copy the movements to a song and, with practice remember the sequence. Finger plays are also found in many languages and cultures.

Conversations

Simply talking with an infant or toddler is a wonderful way to build their attention, working memory, and self-control. With younger infants, begin by following the infant's attention and naming aloud the things holding his/her attention. This will help the infant maintain attention a little longer and provide an opportunity to practice actively focusing and sustaining attention.

As infants get older, point out and talk about interesting objects or events to help them learn to focus their attention. As babies learn language, they also develop their memory of what they hear, eventually mapping words to objects and actions.

For more information, visit <http://www.inclusivechildcare.org/>.

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