

The Brown Model of ADD Syndrome

By Thomas Brown, Ph.D.

From more than 25 years of clinical interviews and research with children, adolescents and adults who have ADD/ADHD, Dr. Brown has developed an expanded model to describe the complex cognitive functions impaired in ADD Syndrome. This model describes executive functions, the cognitive management system of the human brain.

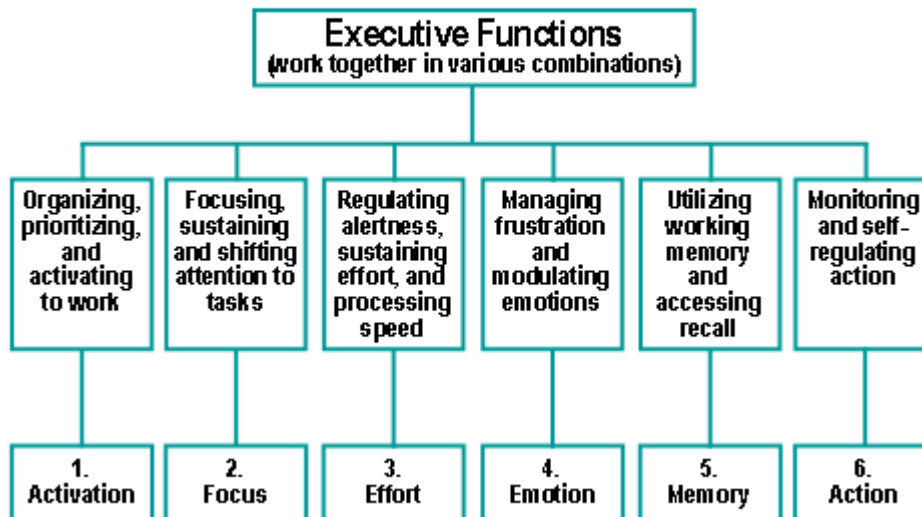
Although the model shows six separate clusters, these functions continually work together, usually rapidly and unconsciously, to help each individual manage many tasks of daily life. The functions appear in basic forms in young children and gradually become more complex as the brain matures throughout childhood, adolescence and early adulthood.

Everyone has occasional impairments in their executive functions, individuals with ADD Syndrome experience much more difficulty in development and use of these functions than do most others of the same age and developmental level. Yet even those with severe ADHD usually have some activities where their executive functions work very well.

They may have chronic difficulty with ADHD symptoms in most areas of life, but when it comes to a few special interests like playing sports or video games, doing art or building lego constructions, their ADHD symptoms are absent. This phenomenon of "can do it here, but not most anyplace else" makes it appear that ADHD is a simple problem of lacking willpower; it isn't. These impairments of executive functions are usually due to inherited problems in the chemistry of the brain's management system.

Utilizing clinical interview methods, Dr. Brown studied children, adolescents and adults diagnosed with ADHD according to the DSM criteria. He compared their descriptions of their problems with those of matched normal controls. Comparisons between the ADHD-diagnosed and the non-clinical samples in each age group yielded reports of impairments that can be recognized in the six clusters of this model of executive functions:

Executive Functions Impaired in ADD Syndrome



[TE Brown (2001) Manual for Attention Deficit Disorder Scales for Children and Adolescents]

1. **Activation:** organizing tasks and materials, estimating time, prioritizing tasks, and getting started on work tasks. Patients with ADD describe chronic difficulty with excessive procrastination. Often they will put off getting started on a task, even a task they recognize as very important to them, until the very last minute. It is as though they cannot get themselves started until the point where they perceive the task as an acute emergency.
2. **Focus:** focusing, sustaining focus, and shifting focus to tasks. Some describe their difficulty in sustaining focus as similar to trying to listen to the car radio when you drive too far away from the station and the signal begins fading in and out: you get some of it and lose some of it. They say they are distracted easily not only by things that are going on around them, but also by thoughts in their own minds. In addition, focus on reading poses difficulties for many. Words are generally understood as they are read, but often have to be read over and over again in order for the meaning to be fully grasped and remembered.
3. **Effort:** regulating alertness, sustaining effort, and processing speed. Many with ADHD report they can perform short-term projects well, but have much more difficulty with sustained effort over longer periods of time. They also find it difficult to complete tasks on time, especially when required to do expository writing. Many also experience chronic difficulty regulating sleep and alertness. Often they stay up too late because they can't shut their head off. Once asleep, they often sleep like dead people and have a big problem getting up in the morning.
4. **Emotion:** managing frustration and modulating emotions. Although DSM-IV does not recognize any symptoms related to the management of emotion as an aspect of ADHD, many with this disorder describe chronic difficulties managing frustration, anger, worry, disappointment, desire, and other emotions. They speak as though these emotions, when experienced, take over their thinking as a computer virus invades a computer, making it impossible for them give attention to anything else. They find it very difficult to get the emotion into perspective, to put it to the back of their mind, and to get on with what they need to do.
5. **Memory:** utilizing working memory and accessing recall. Very often, people with ADHD will report that they have adequate or exceptional memory for things that happened long ago, but great difficulty in being able to remember where they just put something, what someone just said to them, or what they were about to say. They may describe difficulty holding one or several things "on line" while attending to other tasks. In addition, persons with ADHD often complain that they cannot pull out of memory information they have learned when they need it.
6. **Action:** monitoring and regulating self-action. Many persons with ADHD, even those without problems of hyperactive behavior, report chronic problems in regulating their actions. They often are too impulsive in what they say or do, and in the way they think, jumping too quickly to inaccurate conclusions. Persons with ADHD also report problems in monitoring the context in which they are interacting. They fail to notice when other people are puzzled, or hurt or annoyed by what they have just said or done and thus fail to modify their behavior in response to specific circumstances. Often they also report chronic difficulty in regulating the pace of their actions, in slowing self and/or speeding up as needed for specific tasks.

Most children, adolescents and adults with ADHD report these six clusters of impairments as chronic, to a degree markedly greater than persons without ADHD. The clusters are not mutually exclusive categories; they tend to overlap and are often interactive. Executive Functions impaired in ADHD are complex and multi-faceted. This model is explained in detail in Dr. Brown's new book, [Attention Deficit Disorder: The Unfocused Mind in Children and Adults](#), published by Yale University Press in September, 2005.

Impairments of these executive functions can be assessed with The Brown Attention Deficit Disorder Scales, normed rating scales for children, adolescents and adults. Used in schools and clinics as well as by physicians and mental health practitioners throughout the U.S. and in many other countries, these scales and manuals that explain their use and interpretation are published by PsychCorp, the company that also publishes the Wechsler Scales for assessing IQ and memory.