

ADHD and the Brain

Prefrontal Cortex:

The higher level decision center for the brain. Responsible for coordinating executive functioning, attention, cognitive flexibility, and emotional control.

Believed to be underactive and late to mature in people with ADHD.

Parietal Lobe:

Responsible for interpreting visual information, numbers, shapes, and space.

Occipital Lobe:

Responsible for visual information, colors, shapes, and reading.

Deficiencies in this area could result in difficulties reading and writing, and recognizing objects.

Temporal Lobe:

Responsible for auditory processing, verbal memory, and auditory and visual processing of sensory information.

Deficiencies in this area can manifest into behaviors such as: difficulty following a lesson, becoming easily distracted, and difficulty developing meaningful relationships.

Limbic System:

Responsible for regulating emotions, fear, memory, and learning.

Deficiencies in this area could result in restlessness, inattention, or emotional volatility.

Basal Ganglia:

Regulates communication within the brain and includes the reward areas and circuits. Responsible for motor control, motor learning, and facilitating movement.

Deficiencies in this area can cause inattention and impulsivity.

Brainstem:

Part of the brainstem, the Reticular Activating System, is a major relay system among the brain's pathways.

Deficiencies in this area of the brain can cause impulsivity, inattention, or hyperactivity.

