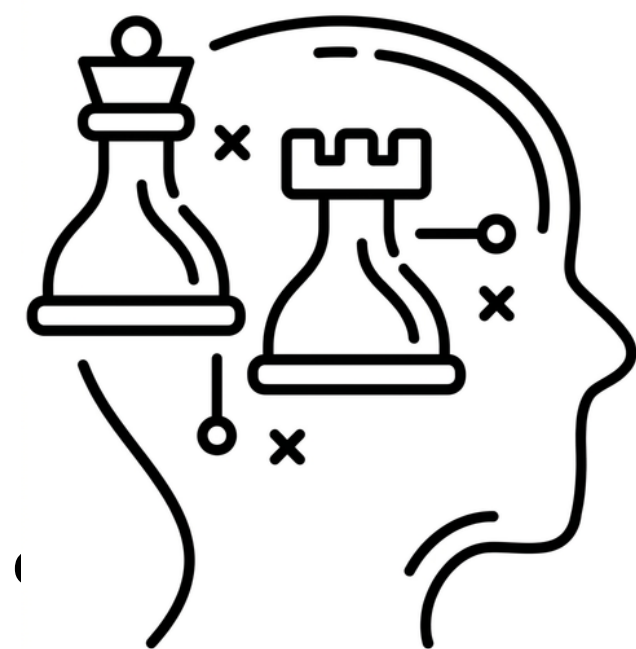


CHESS: A GYM FOR THE MIND



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When thinking about chess, one of the most fascinating aspects is its connection to **psychology**. At least once in life, you've probably heard someone say, "Chess is great for the mind!", but what does this really mean? How exactly do chess games help develop the mind?



Chess is a **strategic and reasoning game** that demands a specific type of focus and thought. Some researchers have observed that this game shapes the brain and uniquely develops certain areas. For example, expert chess players exhibit **greater brain activity in regions associated with problem-solving**. This is because, in timed matches, players must quickly devise solutions in response to their opponent's moves.

Additionally, studies have shown that amateur players **engage the medial temporal lobe of the brain**, an area that facilitates the formation of new long-term memories. This means chess can enhance memory retention and recall.

Another interesting fact is that chess **engages both hemispheres of the brain**. The right hemisphere, which is creative and intuitive, processes information globally, visually, and intuitively. In chess, this allows players to recognize patterns, strategies, and the opponent's playing style, helping predict their next moves.

Meanwhile, the left hemisphere, dominated by logical and analytical thinking, manages linear, sequential, and rational thought. During a game, this side of the brain drives logical decision-making.

As a result, even outside the game, chess players use both hemispheres to solve everyday problems, making them more adaptable and advanced thinkers.

Ultimately, chess fosters **comprehensive cognitive development**, where intuition and rationality constantly collaborate. This transforms the game into an effective tool for mental and personal growth.





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• THE COGNITIVE BENEFITS OF CHESS IN CHILD DEVELOPMENT

Starting to play chess at a young age **helps children develop logical thinking, pattern recognition and memory.**

In terms of logical thinking, this skill is honed effectively because, before making any move, players must consider the

consequences of each piece's movement and anticipate how their opponent might respond. As a result, children learn to apply this structured thinking method to other

situations. Before making decisions, they analyze every possible outcome, pay closer attention to details, and avoid mistakes.

Pattern recognition during the game enables children to make decisions more quickly and rationally. Outside of the game, this skill enhances their ability to understand problems and texts, making it easier to identify causes, effects, and logical processes, even in experiments.

Additionally, chess boosts memory: to win, players must remember piece movements, avoid threats, and learn from past mistakes. These skills translate into improved academic performance, enhancing memorization abilities and making studying more effective.

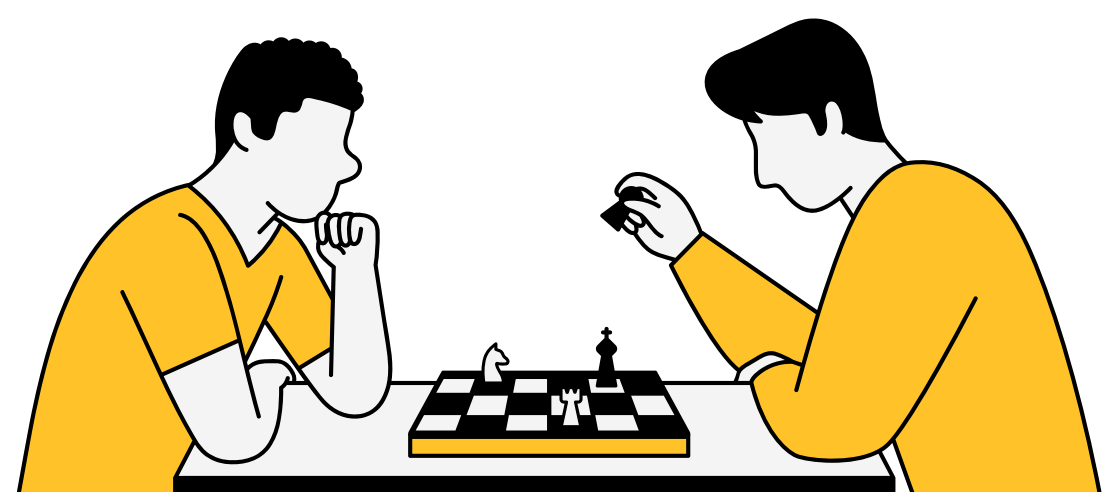


• ADHD AND CHESS: A NEW APPROACH

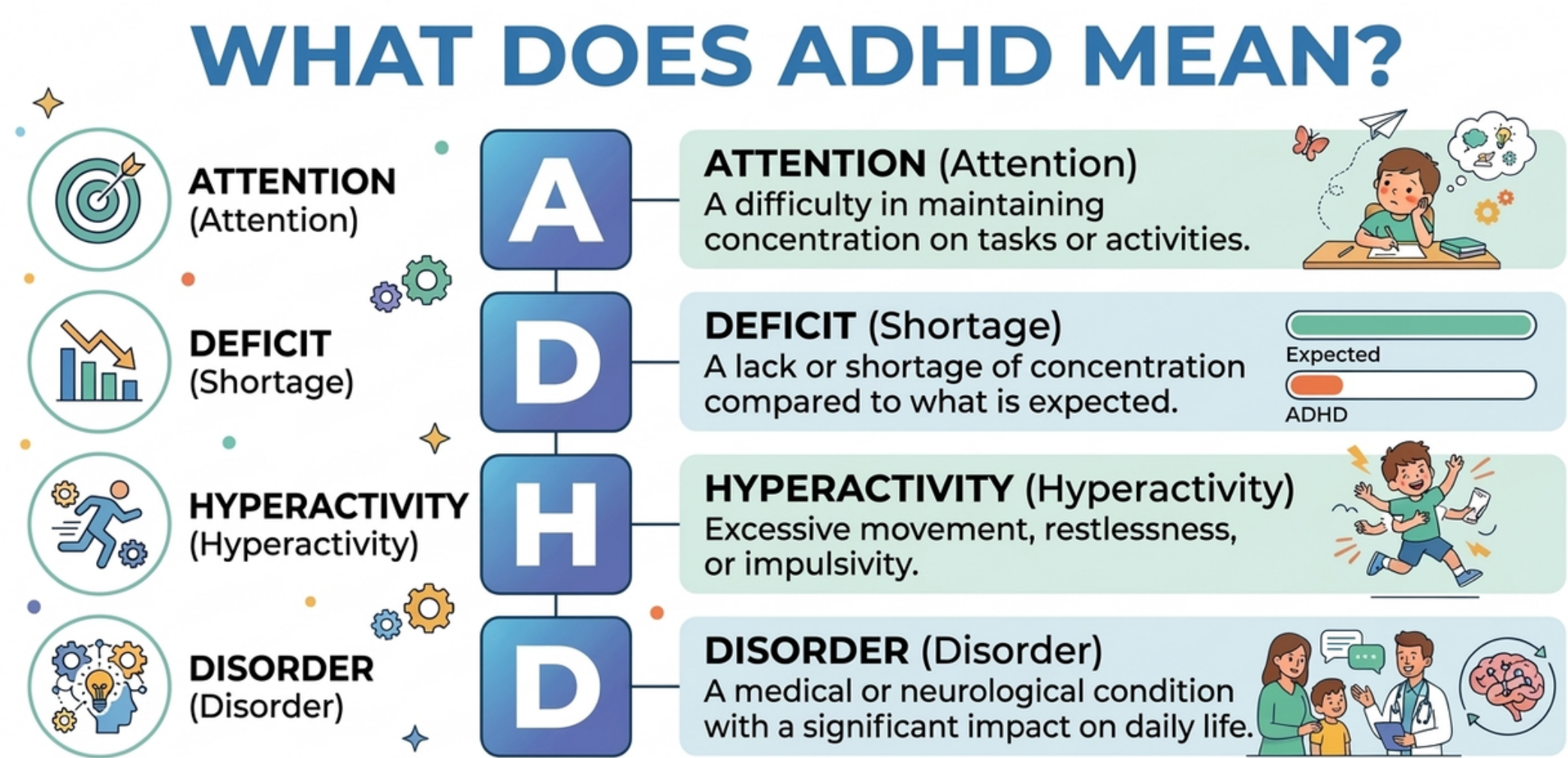
Moreover, chess **helps alleviate symptoms of ADHD**, a condition that affects development and begins in childhood, often continuing into adulthood. The primary symptoms include difficulty concentrating, hyperactivity, and impulsivity. In young people, this often leads to challenges in following lessons, instructions, completing assignments, and meeting deadlines.

The mental training involved in playing chess helps reduce symptom severity while promoting focus, attention, and better control over impulsive behaviors.

A study has shown that individuals with ADHD who regularly play chess



experience a **41% reduction in hyperactivity and inattention**. While it does not replace specific therapeutic interventions, playing chess serves as a valuable complementary activity that helps promote attention control and impulse management.



• PREVENTING BRAIN AGING BY PLAYING CHESS

Chess can be used to **combat and prevent cerebro-cognitive disorders such as Alzheimer’s**, the most common form of dementia, which causes memory loss, impaired thinking, and difficulties in daily functioning. The disease progresses over time, and early diagnosis, as well as prevention methods, are crucial to managing it differently and improving quality of life.

But how exactly does chess help prevent Alzheimer’s? In general, older adults are encouraged to engage in activities like reading, board games, and Sudoku to stimulate cognitive processes and slow cognitive decline. Chess fits perfectly into these cognitive and recreational activities because **it keeps the mind sharp and helps train cognitive functions**, acting as a “gym for the brain”. This strengthens memory, focus, logical thinking, and creativity.

As a result, chess stimulates the brain to work intensely, coherently and continuously, boosting cognitive activity.



Furthermore, several studies show that this activity **slows brain aging** by strengthening cognitive reserve and acting as a “protective shield” against decline. For individuals already diagnosed with the condition, taking up chess in the early stages of the disease has been linked to **improved quality of life** and **enhanced cognitive functions**, including learning, abstract reasoning, self-control, and problem-solving.



Erno Erbs, *Una partita a scacchi* (A Game of Chess), oil on canvas

• BIBLIOGRAPHY

To delve deeper into the topic, you can explore the title:

- > Breda Monica, Gallione Chiara, September 7, 2022, *Il gioco degli scacchi contro la demenza (Chess as a Tool Against Dementia)*, Aging Project - Science Bites, University of Oriental Piemonte;
- > Lillo-Crespo Manuel, Forner-Ruiz Mar, Riquelme-Galindo Jorge, Ruiz-Fernández Daniel, García-Sanjuan Sofía, June 14, 2019, Chess Practice as a Protective Factor in Dementia, Int J Environ Res Public Health;
- > Chessnut, August 18, 2023, *11 sorprendenti benefici del gioco degli scacchi nella vita quotidiana (11 Surprising Benefits of Chess in Everyday Life)*, Chessnutech Blog;
- > De Figlio Angeli, May 21, 2021, *Pratica degli scacchi e demenza (Chess Practice and Dementia)*, State of Mind;
- > Kaabil Kids, *How chess improves memory, patterns & logical thinking*, Kaabil Kids Blog;



> Ellie Kaufman, June 15, 2015, *How Chess Players' Brains Are Different From Everybody Else's*, Mic.com;
> Royal Chess Mall, July 8, 2024, *I benefici psicologici degli scacchi: riduzione dello stress e concentrazione* (*The Psychological Benefits of Chess: Stress Reduction and Focus*), Royal Chess Mall Blog.