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COGNITIVE ABILITIES AND SKILLS

What is cognition?

Cognition is about how a person understands the world and acts in it. It is the set of mental abilities or processes that are part of nearly every human action while we are awake.

What are cognitive abilities?

Cognitive abilities are brain-based skills we need to carry out any task from the simplest to the most complex. They have more to do with the mechanisms of how we learn, remember, problem-solve, and pay attention, rather than with any actual knowledge.

For example, answering the telephone involves perception (hearing the ring tone), decision taking (answering or not), motor skill (lifting the receiver), language skills (talking and understanding language), social skills (interpreting tone of voice and interacting properly with another human being).

Cognitive abilities or skills are supported by specific neuronal networks. For instance memory skills rely mainly on parts of the temporal lobes and parts of the frontal lobes (behind the forehead). People with traumatic brain injuries can experience lower cognitive ability linked to compromised neuronal regions and networks (which is why neuro rehabilitation is so important).

The table below indicates the main brain functions involved in cognition followed by brain teasers that will help you exercise the cognitive abilities described.

COGNITIVE ABILITIES ARE BRAIN'S FUNCTIONS

Cognitive Ability/Brain Function	Skills involved
PERCEPTION	Recognition and interpretation of sensory stimuli (smell, touch, hearing...)
ATTENTION	Ability to sustain concentration on a particular object, action, or thought, and ability to manage competing demands in our environment.
MEMORY	Short-term/ working memory (limited storage), and Long-term memory (unlimited storage).
MOTOR SKILLS	Ability to mobilize our muscles and bodies, and ability to manipulate objects.
LANGUAGE	Skills allowing us to translate sounds into words and generate verbal output.
VISUAL AND SPACIAL PROCESSING	Ability to process incoming visual stimuli, to understand spatial relationship between objects, and

	<p>to visualize images and scenarios.</p>
<p>EXECUTIVE FUNCTIONS</p>	<p>Abilities that enable goal-oriented behavior, such as the ability to plan, and execute a goal. These include:</p> <p>Flexibility: the capacity for quickly switching to the appropriate mental mode.</p> <p>Theory of mind: insight into other people’s inner world, their plans, their likes and dislikes.</p> <p>Anticipation: prediction based on pattern recognition.</p> <p>Problem-solving: defining the problem in the right way to then generate solutions and pick the right one.</p> <p>Decision making: the ability to make decisions based on problem-solving, on incomplete information and on emotions (ours and others’).</p> <p>Working Memory: the capacity to hold and manipulate information “on-line” in real time.</p> <p>Emotional self-regulation: the ability to identify and manage one’s own emotions for good performance.</p> <p>Sequencing: the ability to break down complex actions into manageable units and prioritize them in</p>

the right order.

Inhibition: the ability to withstand distraction, and internal urges.

(Reference -: Internet Resources)

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