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COGNITIVE REHABILITATION THERAPY (CRT)

What is Cognitive Rehabilitation Therapy?

Cognitive Rehabilitation Therapy (CRT) is the process of learning cognitive skills that have been lost or altered as a result of damage to the brain.

Cognitive skills are the core skills your brain uses to think, read, learn, remember, reason and pay attention. Working together, they take incoming information and move it into the store of knowledge you use in everyday life. These skills are not to do with intelligence but a deficit in any of them can affect your ability to learn.

Each cognitive skill plays an important part in processing new information. In order to grasp, retain and use any new information effectively, all your cognitive skills need to be working properly.

What are Cognitive Skills?

Here is a brief description of each of the main cognitive skills and the difficulties you may have if that skill is weak.

SKILL	WHAT IT DOES	COMMON PROBLEMS IF THIS SKILL IS WEAK
ATTENTION - SUSTAINED	Enables you to stay focused on a task for a sustained period of time.	Difficulty concentrating, often jumping from task to task, lots of unfinished projects.
ATTENTION – SELECTIVE	Enables you to stay focused on a task and filter out distractions.	Easily distracted by noise, movement or other incoming information.
ATTENTION - ALTERNATING & DIVIDED	Enables you to switch your attention from one thing to another and do two things at once.	May become stressed or anxious in over-stimulating environments, difficulty multi-tasking, difficulty carrying out more complex tasks.
MEMORY – LONG TERM	Enables you to recall information stored in the past.	Forgetting things you used to know, forgetting names, doing poorly in tests.
MEMORY – SHORT TERM AND WORKING	Enables you to hold on to information whilst using it e.g. remembering instructions and carrying them out.	Difficulty following multi-step instructions, forgetting what was just said in a conversation.
LOGIC AND REASONING	Enables you to reason, form ideas and solve problems.	Frequently asking, “What do I do next?” or saying, “I don’t understand.” Struggling with maths and more complex problems, feeling stuck or overwhelmed.
AUDITORY PROCESSING	Enables you to analyse, identify, blend and separate sounds.	Struggling with learning to read, fluent reading or reading comprehension.
VISUAL PROCESSING	Enables you to think in visual images/pictures.	Difficulty understanding or remembering what you’ve just read, following directions, reading maps, doing visual problems.
PROCESSING SPEED	Enables you to perform tasks quickly and accurately.	Most tasks are more difficult. It takes a long time to complete tasks for school or work, frequently feeling “left behind”.

Development of Cognitive Skills

Cognitive skills start to develop as soon as a baby is born. As soon as they come into the world the baby begins to absorb and process information from their environment. They grow and develop rapidly in the first five years of life. As information is gathered and stored in their brains, children develop knowledge, understanding, skills and the ability to problem solve.

Loss of Cognitive skills

Following brain injury, cognitive problems are extremely common and can be more problematic in the longer term than physical problems. The areas of the brain that have been damaged can determine the sort of problems a person might have. It is also important to consider that our brains continue to develop well into adulthood; the true impact of a brain injury in childhood may not become apparent for several years. Typically, difficulties only emerge in teenage years when there is another big surge in brain development.

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Aims of Cognitive Rehabilitation Therapy (CRT)

CRT aims to address a person's problems if any of the cognitive skills are weak or damaged. It consists of 4 main areas:

1. TUTORING:	2. PROCESS TRAINING:	3. STRATEGY TRAINING:	4. FUNCTIONAL ACTIVITIES TRAINING:
FOCUS: To develop insight	**FOCUS: Restoration**	**FOCUS: Compensation for the problem rather than resolving it**	**FOCUS: Real life improvements**
Aims Through tutoring the therapist can help the person with the brain injury gain awareness into the problems they might be experiencing. This is done by explaining how the brain works, which areas might have been damaged and what this might mean in your everyday life. Greater awareness of the problem can lead to better adjustment to it.	**Aims** Process training aims to restore skills that have been lost or damaged through brain injury. ALL skills are learned. When we first learn a new skill, it takes a lot of thought and effort to do it (e.g. learning to brush your teeth, learning to play a new sport or drive a car.) With practice, we become better at it and are able to perform the skill or activity almost without thinking i.e. automatically. Following brain injury, some skills may have been lost and will need to be relearned. This can take a lot of effort and hours of practice. Fortunately, the brain is capable of creating new pathways in order to re-route information around damaged areas (a process known as brain plasticity.) In CRT we will target specific cognitive skills in order to stimulate new connections in the brain. By practising a skill, brain cells will be continually firing (sending messages) together. This will eventually cause connections to be made, new pathways will be laid down in the brain and skills will become easier to perform.	**Aims** If cognitive skills cannot be improved through process training, then strategies can be taught to help the person compensate for the problem. External strategies are the most commonly used. These are like tools we can use to assist us such as electronic devices, diaries, notebooks, alarms or watches. Good use of strategies can enable a problem to be bypassed and can free up the brain injured person to get on with their day. Strategies can take away the worry of, for example, forgetting what you need to take to school that day.	**Aims** The final goal of any cognitive rehabilitation program is improvement in everyday functioning. There is no point educating a person about their problems, spending time practising underlying cognitive skills or teaching compensatory strategies if all this is not applied to everyday life. Neither is a real-life task done in CRT for its own sake. Rather the emphasis will be on doing a task in order to work on a specific cognitive skill. For example, if you have difficulty remembering instructions and planning and organising, an activity such as going to the shop with a list of things to buy could be used to address all these things. The therapist will set goals for you depending on how easy or difficult you find the task. The important thing to remember is that it is not about teaching someone to do the shopping, but about teaching the cognitive skills you need to do the shopping. In this way, cognitive rehabilitation aims to improve function in everyday activities and everyday activities can be used to improve cognitive function.

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What you can expect from us in

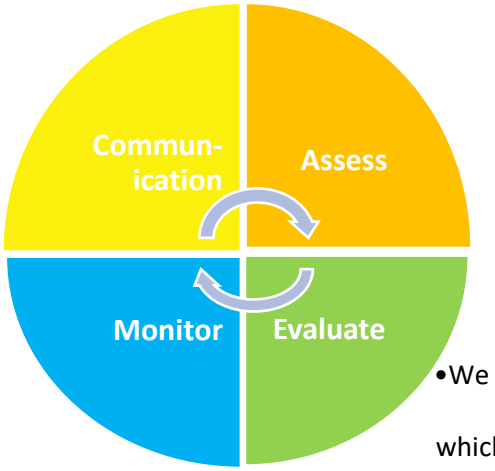
Cognitive Rehabilitation Therapy?

• COMMUNICATION

•We will always endeavour to explain things in a way you can understand. We will be honest with you, supportive of you and will work with you to get the best outcome possible for you.

• ASSESS

•You will be asked to take part in assessments which will help us to understand your needs. These assessments may include questionnaires, activities, talking and observation.



• MONITOR

•We will continually assess your progress and modify your goals accordingly.

•EVALUATE

•We will evaluate the results and tailor a treatment plan, which will be discussed with you.

•This will guide all the activities that are selected for you to do. Sometimes you might be asked to do an activity that does not seem relevant: we will always explain the reason for doing something and how it will help you.

What do we expect from you in Cognitive Rehabilitation Therapy?

We ask that you:

References: Brannagan, A. and Malia, K. (2014) How to do Cognitive Rehabilitation. Gibson, K. (2018). What are cognitive skills. Available: https://www.learningrx.com. Last accessed 16.3.2019. The Society for Cognitive Rehabilitation, (2019) What is Cognitive Rehabilitation Therapy?