

COGNITIVE REMEDIATION *for* PSYCHIATRIC DISORDERS

What Is Cognitive Remediation?

Cognitive remediation (CR), also called cognitive enhancement, cognitive rehabilitation, or cognitive training, is a behavioral intervention targeting problems with cognition (the mental ability to process and understand information and ideas) through the application of learning principles, with the ultimate goal of improving day-to-day community functioning.

Who Might It Help?

CR is for people who have cognitive difficulties that contribute to problems in functioning, such as social relationships, work, school, or self-care and independent living. Currently, CR has shown cognitive benefits for people with schizophrenia. It is also being explored for those with bipolar disorder, major depression, anxiety disorders, attention deficits, and autism.

What Does Cognitive Remediation Involve?

CR programs vary in the methods they use to improve cognitive functioning. Almost all CR programs include *restorative task practice* of cognitive exercises. Many programs are facilitated by a trained clinician who provides *strategy coaching*. In some programs, trained clinicians may also teach *compensatory skills* and prompt participants to describe their thinking process in approaching these exercises, also called *meta-cognitive training*. These methods are described below.

- *Restorative task practice*: this involves doing mental exercises that target different areas of cognition, including attention, learning and memory, planning, problem solving, and the speed with which we work through complex thoughts. Restorative task practice is usually done with commercially available software. There are many commercially available cognitive software packages; Cogpack, PSS CogRehab, and PositScience currently show the greatest success among participants.
- *Strategy coaching*: this involves teaching participants strategies to help improve their cognitive performance on the cognitive practice exercises. Examples of strategies taught include reading information aloud or creating a story containing the information to help participants learn new material better.
- *Compensatory skills training*: this training is aimed at helping people work around their cognitive limitations toward performing important tasks and optimizing community functioning. For example, the clinician may teach the individual how to keep appointments by maintaining a daily schedule, remember verbal information by immediately repeating the information back for verification, or improve attention by removing distractors.
- *Metacognitive training*: this training is focused on increasing awareness of and the ability to monitor one's own thoughts toward enhancing cognitive performance in daily activities. Metacognitive skills can be strengthened by asking the participant to pay attention to how and when they improved their performance

What Is Cognitive Behavior Therapy?

Behavior Therapy and Cognitive Behavior Therapy are types of treatment that are based firmly on research findings. These approaches aid people in achieving specific changes or goals.

Changes or goals might involve:

- A way of acting, like confronting our feared thoughts
- A way of feeling, like helping a person be less scared, less depressed, or less anxious
- A way of thinking, like evaluating the probability of an event occurring
- A way of dealing with physical or medical problems, like lessening back pain or helping a person stick to a doctor's suggestions.

Behavior Therapists and Cognitive Behavior Therapists usually focus more on the current situation and its solution, rather than the past. They concentrate on a person's views and beliefs about their life, not on personality traits. Behavior Therapists and Cognitive Behavior Therapists treat individuals, parents, children, couples, and families. Replacing ways of living that do not work well with ways of living that work, and giving people more control over their lives, are common goals of behavior and cognitive behavior therapy.

HOW TO GET HELP: If you are looking for help, either for yourself or someone else, you may be tempted to call someone who advertises in a local publication or who comes up from a search of the Internet. You may, or may not, find a competent therapist in this manner. It is wise to check on the credentials of a psychotherapist. It is expected that competent therapists hold advanced academic degrees and training. They should be listed as members of professional organizations, such as the Association for Behavioral and Cognitive Therapies or the American Psychological Association. Of course, they should be licensed to practice in your state. You can find competent specialists who are affiliated with local universities or mental health facilities or who are listed on the websites of professional organizations. You may, of course, visit our website (www.abct.org) and click on "Find a CBT Therapist."

The Association for Behavioral and Cognitive Therapies (ABCT) is an interdisciplinary organization committed to the advancement of a scientific approach to the understanding and amelioration of problems of the human condition. These aims are achieved through the investigation and application of behavioral, cognitive, and other evidence-based principles to assessment, prevention, and treatment.

on a particular cognitive task or by noting what things led them to become distracted.

CR programs for psychiatric disorders vary in the use of strategy coaching and the teaching of compensatory strategies. These teaching approaches require a trained clinician who provides such instruction during the course of cognitive exercise practice. Some CR programs focus only on restorative task practice and do not use a clinician to facilitate the practice (e.g., PositScience). Other CR programs use a trained clinician who provides a combination of strategy coaching, teaching compensatory skills, and metacognitive training. In programs in which CR is combined with another type of psychiatric rehabilitation (e.g., vocational rehabilitation, social skills training), the clinician plays a key role in integrating the cognitive and rehabilitative work. Programs that combine cognitive exercise practice and psychosocial rehabilitation and have been shown to improve cognition and community functioning include the Thinking Skills for Work program (improves cognition and work) and Cognitive Enhancement Therapy (improves cognition and social cognition).

How Long Are Cognitive Remediation Programs and When Can I Expect Changes?

CR programs vary in the length and frequency of sessions, and therefore in duration of the program. On average, CR programs provide approximately 24 hours of treatment programming over 3 to 6 months. The cognitive benefits of CR accrue gradually over the course of practice, with some benefits becoming apparent during the program and most readily apparent by its end. Cognitive effects of CR are assessed using standardized, neuropsychological tests that are different from the exercises used in the CR practice. These tests are given before the CR starts, and are re-administered when CR is completed. Benefits of CR are determined by comparing pre- and posttest performance.

Is Cognitive Remediation Effective?

CR is effective at improving cognitive functioning in persons with schizophrenia and other serious mental illnesses, and, in some studies is associated with modest reductions in clinical symptoms, such as psychosis and lack of motivation. Some programs have also improved psychosocial functioning in areas such as work or social relationships. Specifically, programs that combine CR with a psychiatric/psychosocial rehabilitation intervention that targets a specific area of functioning, such as supported employment to improve work functioning or social skills and social cognition training to improve social functioning, have improved psychosocial function compared to psychiatric rehabilitation alone. Thus, improvements in cognitive functioning demonstrated in programs that provide CR alone, without other programming focused on psychosocial functioning, do not transfer to other areas of community functioning. CR appears to help people learn new skills, thereby increasing their ability to learn and benefit from rehabilitation and psychotherapeutic interventions.

CR is important for persons with serious mental illness for two primary reasons. First, impaired cognitive functioning in this population is strongly

associated with poor psychosocial functioning in areas such as work, school, social relationships, and self-care and independent living. Second, people with more impaired cognitive functioning benefit less from established psychiatric rehabilitation or psychosocial treatment programs, presumably because they have a lower capacity to learn new skills.

Finding the Right Cognitive Remediation Program

Some CR programs are combined with other rehabilitation programs, whereas others are not. If a “stand alone” CR program is all that is available, people are encouraged to find an additional rehabilitation program focused on the area of functioning they most want to change. Finding a CR program in the community can be difficult, as there are few people trained to provide these programs. Fortunately, the field is rapidly growing. It is possible to order commercially available CR software programs for home use, but the effectiveness of home practice without the guidance of a trained professional is unknown at this time. Local mental health centers or your doctor may have information about accessing a CR program.

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For more information or to find a therapist:

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