

## The Brief Cognitive Assessment Tool

*The following information may or may not be appropriate to your clinical setting. Please review the information and determine the appropriateness of the content prior to sharing with your staff.*

**Eligible for LMS Credit:  Yes**

The BCAT Approach is a unique applied concept for assessing and working with people who have memory and other cognitive impairments. It is designed for any clinical and residential setting in which cognitive functioning and cognitive impairment is a central issue. The BCAT Approach integrates three distinct systems: The BCAT Test System, the BCAT Brain Rehabilitation Program, and the BCAT Working Memory Exercise Book. All three are person-centered programs that are used by healthcare professionals, facilities, and other stakeholders. The Test System rapidly, yet comprehensively, assesses current cognitive functioning. Test scores can be used to determine specific Brain Rehabilitation interventions and working memory exercises. The BCAT Approach is interactive and online.

### The BCAT Test System

The BCAT Test System is comprised of unique assessment instruments. The primary test is the Brief Cognitive Assessment Tool (BCAT) which can be administered in 10-15 minutes, is sensitive to the full spectrum of cognitive functioning (normal, MCI, dementia), produces separate Memory Factor and Executive Functions Factor scores, and can predict basic and instrumental activities of daily living (ADL, IADL). The BCAT has also been shown to help predict discharge dispositions, facilitate Advance Directives determinations, aid in fall prevention programs, and help with non-pharmacological behavior management. It is rapidly becoming the cognitive assessment of choice for rehab therapists, especially for those who treat cognitive-communication problems.

The WIPE Depression Screen was designed as a "process" screening instrument to very rapidly assess depression status. The WIPE consists of four questions that address worry, anhedonia, pessimism, and energy. It can be administered in less than three minutes, and is ideal for clinical situations in which the provider wants to track mood status over time.

The Kitchen Picture Test of Judgment (KPT) was designed as a visually presented test of practical judgment. The KPT is a unique illustration of a kitchen scene in which three potentially dangerous situations are unfolding. Patients are asked to describe the scene as fully as they can, to identify the three problem situations, to rank the order of importance of each situation in terms of dangerousness, and to offer solutions that would resolve the three problems. The KPT has been found to have construct validity (it measures the construct "judgment"), and can be used to differentiate between those who have dementia and those who do not.

The BCIS was designed to assess the cognitive functioning of patients with *severe* dementia. The BCIS is an 11-item, 14-point scale. It was developed to not only track cognitive changes in severely demented patients specifically, but to provide information to better manage behavior problems. We recommend using the BCIS when severe cognitive impairment has already been established, or when the patient scores under 25 on the BCAT. It is most effective in confirming severe impairment and tracking cognitive changes over time in advanced dementia.

# Fast Facts Friday

## The BCAT Brain Rehabilitation Program

Brain rehabilitation is a *loss and restoration* process, based on cognitive exercises that promote brain cells (neurons) to improve functioning. It is based on the principles of *neuroplasticity* and *cognitive reserve*. Neuroplasticity refers to the brain’s ability to reorganize itself by forming new neural connections, especially through specific cognitive or physical exercises. Cognitive reserve refers to the brain’s ability to tolerate brain pathology (like Alzheimer’s disease) without demonstrating cognitive symptoms (like memory loss).

This program is used either as cognitive rehabilitation (return the patient to baseline) or to promote positive cognitive functioning (and buffer against cognitive decline). The main modules are interactive and online; and they target attention, memory, and executive functions. We refer to this triad as the "cognitive task manager" used for everyday functioning. Our program is not a home brain fitness program, though one could do the exercises at home. Rather, it works best as an intervention tool for professionals who are working with patients who demonstrate cognitive decline. The program is ideal for rehabilitation therapists, and can promote positive rehab outcomes in physical therapy, occupational therapy and speech therapy.

The BCAT Rehabilitation approach emphasizes three cognitive domains: attention, memory, and executive functions. We call these three domains the *Cognitive Task Manager* because they are central to everyday functioning. Our cognitive exercises target these three areas. Please note the table below. It indicates the preferred rehabilitation exercise with the domains it is designed to address.

INTERACTIVE MODULES	COGNITIVE DOMAIN
Memory Match (Interactive)	Attention and Memory
Sort the Set (Interactive)	Attention and Executive Functions
Color Illusion (Interactive)	Attention and Executive Functions

We also provide a series of other more general cognitive exercises. These include Mazes, Word Searches, and Word Scrambles. Each have different levels of difficulty and each has been empirically tested for effectiveness. For these exercises, trial-and-error is necessary to find the right “fit” between difficulty level and the participant’s ability to do the tasks.

We are often asked if people who have dementia can benefit from the BCAT Rehabilitation exercises. In our research studies, we have found that individuals who are cognitively normal, who have Mild Cognitive Impairment (MCI), and who have mild dementia show the most improvement. We have not found as much benefit for persons with moderate to severe dementia. For persons with more advanced dementia, we suggest using the BCAT Recreation Program.

## The BCAT Working Memory Exercise Book

Working memory is the ability to mentally hold and manipulate information over a short period of time. You might think of it as a cognitive “workspace” in which we temporarily store information we hear, see, or feel (tactile) in order to do something with it. From a working memory perspective, the two dominant domains are phonological and visuo-spatial. There is often a good deal of overlap and synergy between the two. There are direct consequences to impaired working memory. Reduced or impaired working memory means that one cannot efficiently make new memories and may be limited in performing life tasks.

Examples of everyday working memory:

- Remembering a new phone number or an address
- Following directions—“Make a left turn at the traffic light, and the gas station is on your right.”
- Remembering a person’s name just after meeting her
- Making a mental math calculation—You want to buy an item at the grocery store, and you quickly calculate whether you have enough money

The 15 exercises provided in the *Exercise Book* are based on neuroscience research. Each has been tested with clients who have cognitive capacities that range from normal cognition to severe cognitive impairment. Each exercise type is further divided into “basic” and “complex” levels of difficulty. These are relative terms. Practitioners and clients should use this *Exercise Book* to assist in fostering attainment of goals related to working memory, attention, cognitive-communication, and safety awareness in IADLs.

## The BCAT University – Training Through Two Methods:

**Method A:** Training on the BCAT Test System is included as part of your BCAT license at no additional charge. No continuing education credits are offered.

**Method B:** Dynamic Learning Online—3 Contact Hours, Cost: \$114.00

Cognition affects every aspect of daily living. Because so many older patients have cognitive impairment, proficiency in cognitive assessment is critically important to effective diagnosis, treatment, education, and support. Clinical success and treatment outcome depend upon a clear assessment of cognitive functioning. The BCAT Test System gives you the tools necessary to rapidly assess memory, executive functions, and other aspects of cognition in order to improve treatment and improve function. The primary goal of this program is to equip you with the knowledge and skills necessary to be proficient in administering, scoring, and interpreting the BCAT Test System.

Those who complete this course become Certified BCAT Test System Administrators.

For more information visit [www.thebcat.com](http://www.thebcat.com)

## BCAT Licensing Information

There is an annual licensing fee of \$195 per person. Group rates apply to licenses starting at the 11<sup>th</sup> licensed purchased.

Licensing includes access to:

- All five of the BCAT Test System Tests
  - Use them as frequently as you choose with patients
  - Receive an interactive, test report with patient specific clinical considerations.
- Interactive Brain Rehabilitation Modules
- News for Professionals
- Technical support as needed