



U.S. ARMY

# Cognitive Resilience for Optimal Performance



DIRECTORATE OF PREVENTION,  
RESILIENCE AND READINESS

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Just as we prioritize our physical and mental health, it is also crucial to focus on our brain health. The brain governs everything from our thoughts and memories to our cognitive and motor abilities—it is the very essence of who we are. The brain is composed of nerve cells called neurons that are largely irreplaceable, making lifelong brain care essential.

According to the World Health Organization, brain health is “the state of brain functioning across cognitive, sensory, social-emotional, behavioral and motor domains, allowing a person to realize their full potential over the life course.” We can support our brain health in many ways, such as staying physically active, eating a balanced diet, getting adequate sleep, socializing, and exercising our minds with puzzles, reading and continuous learning.

But how can we train the brain to handle acute stress, trauma and anxiety? Research confirms that the brain can learn and grow at any age, but it requires regular training. The key is to embrace new, complex and challenging activities and engage with them consistently. This is known as cognitive resilience.

According to *Operational and Defense Psychology Review*, cognitive resilience is the capacity to handle and adjust effectively to highly stressful situations, especially in demanding settings. It is built through factors like education, social engagement, team cohesion, lifestyle choices, nutrition and mindfulness, which allow individuals to resist the negative effects of stress.

As the University of Texas at Dallas Center for BrainHealth notes, cognitive resilience is especially critical for handling the rigors of military life. The military lifestyle is demanding and filled with challenges such as frequent deployments, Family separation, sleep deprivation and trauma. Service members must be adaptable, make split-second decisions and operate under pressure. Building cognitive resilience helps them optimize their performance, adapt to challenges and recover from adversity.

A study published in the September/October 2025 issue of the journal *Military Medicine* confirms that specific, targeted brain training can significantly enhance cognitive resilience among service members. The research, led by Applied Research Associates, Inc., highlights a powerful new approach to preparing warfighters for intense psychological and cognitive demands. The study, called Warfighter Brain Fitness Study, evaluated two leading brain fitness programs: SMART (Strategic Memory Advanced Reasoning Training) from the UT Dallas Center for BrainHealth and BrainHQ from Posit Science.

In the study, more than 400 National Guard service members participated in a 90-day training regimen designed to address conditions like anxiety, depression and post-traumatic stress. The findings showed that combining SMART’s strategy-based training with BrainHQ’s adaptive exercises led to significant improvements in both cognitive performance and psychological well-being. The study concludes that targeted cognitive training is an effective tool for building a stronger, more resilient military and promoting a healthier life for service members.





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While this study may be a sign of the future, there are many resources available now to help Soldiers and their Families maintain proper physical and mental health and develop cognitive resilience.

One of these resources is the Ready and Resilient Performance Centers located at 31 locations across the Army. These centers provide the basis for individuals to build and sustain personal readiness and resilience. R2PCs provide mental and physical training to U.S. Army Soldiers, Families and Civilians, focusing on enhancing performance and building resilience. Services include mental skills training, stress management, Army Combat Fitness Test guidance and leadership development to improve cognitive skills, confidence and team cohesion.

Performance Experts at these R2 Performance Centers can help Soldiers understand and enhance the mental side of performance, maximizing the benefits of training and providing skills and techniques to develop strong teams.

PEs can also customize training based on individual needs. They can facilitate a singular training experience or run a series of workshops to help achieve mental skills mastery.

Another resource is Army Community Service, which offers a wide range of educational opportunities, special events and individualized counseling services that support the Soldier and Family. Some of the other services available are Financial Readiness, Army Family Team Building, relocation services and the Family Advocacy Program.

The bottom line is that there are many resources available to improve cognitive resilience and mental health. Many of these programs have been developed to support Soldiers and Families during their military service, but their impact will last a lifetime.

