



**Mind:** Cognitive Reserve - Can We Beat Biology?

**Body:** Building New Neural Networks

**Spirit:** Life Learning

## Cognitive Reserve - Can We Beat Biology?



We know we are living longer — but are we living better? Most would agree that it is not just about adding more years to our life story, it is about making sure those years enriching and rewarding.

Too often, though, we know of friends and family who struggle with cognitive decline as they transition into later years. Is it inevitable? Why is it that some individuals seem to navigate this progression better than others? Is there a secret to stalling or even overcoming cognitive decline?

In the late 1980s, researchers noticed an interesting anomaly. Some individuals, with significant brain pathology, did not evidence a commensurate decline in overall cognitive functioning while they were alive. Others, with less brain pathology, showed much greater challenges in their day to day functional capacities. Clearly, brain pathology in and of itself was not directly associated with the behavioral expression of cognitive function.

This led to the study of ‘Cognitive Reserve.’ Cognitive Reserve (CR) refers to the mind’s resistance to damage to the brain. Some brains are just better able to compensate for damage, and to establish alternative and efficient ways to ‘get the job done.’

Those with higher CR can endure more advanced stages of dementia before their lives are impacted by the disease progression.

Can we Increase our CR?

Much more research needs to be done to determine the factors that contribute toward higher CR.

Some believe that genetics does in fact influence overall cognitive function, but has a lessor relationship with memory.

While some studies show an association between brain size and cognitive function, not all studies support this theory.

Education is sometimes seen as a ‘protective’ factor, stalling the expression of cognitive decline, but not eliminating the risk.

Cognitively stimulating occupations may contribute toward smarter thinking, with no discernible difference with memory.

**Appreciate      Respect      Value**

**Elevating the way the world sees and serves the age 50+.**

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## Building Cognitive Reserve — Some Lifestyle Tips:

Building CR is a lifetime endeavor. We need to introduce these behavioral choices with our children to build these lifelong habits. The longer we are exposed to healthy and enriching environments, the greater the likelihood that we can create more CR. You will notice that the tips do not include a secret ‘magic bullet’ and are fundamental lifestyle habits we know we should incorporate and embrace for both physical and cognitive health.

- Physical Activity — what is good for the body is good for the brain! 150 minutes of activity per week is recommended.
- Nutrition — a healthy diet, such as the Mediterranean Diet is good for the brain.
- Cognitive and Social Activity. Keeping our mind active and challenged. Keep learning! Social engagement is also important. Spend time with others, involve yourself with paid or volunteer work, and reach out and see how you can help others.
- Moderate your alcohol consumption.
- Stress Reduction - manage your stress through exercise, meditation or yoga.
- Get proper sleep - a good 7-8 hours be day.
- Maintain a sense of purpose and service.

This is a new and exciting area of exploration.

While the researchers and academics work to understand better how CR is created, we can at least grab onto these lifestyle choices and see if we can ‘beat biology.’

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## Building New Neural Networks

Need to build new networks in your brain?  
Challenge yourself and take on new habits.

Here are some tips:

1. Add mind energy intensive activities. Choose activities that involve intensive problem solving, self-reflection, strategizing, memorization and decision-making. Take up a new instrument or learn a new language (especially if you have never done this before!)
2. Repetition — new pathways need to be practiced over and over again to become established. If it is a particularly complex activity — you may need 3-4 months to establish new pathways.
3. Take care of your physical health to support the creation of new neural pathways.

You can teach an old dog new tricks!

## Life Learning

"Develop a passion for learning. If you do, you will never cease to grow."

*Anthony J. D'Angelo*