

# **Everything I Wanted to Know About Memory but Forgot to Ask**

By Ninah Kessler, LCSW

Concern about memory is epidemic. Memory loss is the biggest fear of people over 75. According to *USA Today*, one in four people over 70 “experience mild forgetfulness that can disrupt the ability to carry out daily routines.” (3/17/08) However, it’s not just fear and loathing in Century Village. Mid-life professionals with mentally challenging jobs or sandwich generation homemakers are also concerned about memory lapses, and they are not alone. Who doesn’t forget the name of that blonde actress in the movie they saw last night? But there is hope. Memory loss can be managed and the latest neuroscience proves that there are things that you can do to protect your memory.

## ***Why is Memory Loss So Frightening***

In *The Business of Memory*” Charles Baxter writes “In an information age, forgetfulness is a sign of disability and incompetence.” Not only that, but it’s extremely annoying. When you have a job where you have to keep track of various projects or technologies, memory lapses can lead to unemployment. You don’t want your air traffic controller to forget what he did with your plane.

Running a household is not much easier. You were supposed to take Jimmy to soccer and Jessica to the dance recital on Thursday but you’re in the ER because your mom slipped. Is it any wonder that you forget carpool the next morning. I asked a frazzled looking Dad if he forgot something and he said “my son.”

Not to mention mastering the technology necessary to transfer those pictures from your digital to your computer, finding your calendar in your blackberry or even figuring out how to change the ring tones on your cell phone. And you’re not exactly filled with warm fuzzies as you blank on the name of your dental hygienist. (Why doesn’t she wear a name badge? Oh well, I probably wouldn’t be able to read it without my glasses, and who knows where they are.)

Even though it’s usually normal age related memory loss, it’s hard to go blank in the middle of a sentence without worrying that it’s Alzheimer’s. Not to mention the scenarios that go through your mind if you’ve lost a friend or loved one to the disease.

## ***What is Normal Age Related Cognitive Decline?***

Our brains peak in our twenties. By the time we get to our thirties, they begin shrinking at a rate of one half of one percent per year. Because other areas of the brain compensate for neuronal pathways that are lost, we generally do not notice a change until middle age, around 45 – 65. By then it’s the rare individual that does not lose their car keys or find themselves in the kitchen with no idea of what they are doing there. And names, always tricky, become devilishly illusive.

## ***The Importance of Cognitive Reserve***

The more neuronal reserves we have, the older we are likely to be when we notice cognitive decline. The more developed our cognitive pathways are, the more likely we are to have alternate routes on the information highways in our brain. It's just like Bob Woodward, the news anchor with brain injuries from the Iraq war. He was able to make a better recovery because he was a lawyer who spoke Mandarin, had traveled widely and was employed at a mentally demanding job as a news anchor. (And here is the silver lining about challenging jobs – while they demand that you have mental mastery, their cognitive challenges protect the brain.

Likewise, someone with sleep problems, concussions or addiction can experience memory loss much earlier.

According to wikipedia, cognitive reserve can be measured clinically. If you expose yourself to an enriched environment, even if you have Alzheimer's disease, you are likely to have fewer symptoms. So mastering mental challenges at any age is likely to serve as a partial inoculation against cognitive decline.

### ***What Happens to the Brain in Cognitive Decline?***

The job of the brain is to acquire, store and retrieve information. If we don't pay attention, the information is not in the brain and the process is aborted. So the first thing we need to do is pay attention. Although many people take this for granted, it is essential for memory.

When we started Sparks of Genius, we worked with kids with attention problems so we have lots of experience with cutting edge technology that enables you to get the information into your memory banks.

We store new memories in the hippocampus and the frontal lobe is responsible for memory retrieval. Since the frontal lobe declines first, often the memories are there, but we just can't find them. This ability to retrieve information is called working memory and this declines as we age. This is why we forget the name of the movie and usually remember it when the conversation is over.

### ***What Changes in Age Related Cognitive Decline?***

#### *Names*

One of the chief concerns in middle life cognitive decline is forgetting names. Even people who used to be good at names seem to have trouble, and for those of us who always tried to finesse the matter, it doesn't get better.

Names are challenging because they are isolated bits of information. That's why most compensatory strategies for remembering names involve associating the name with

something else and elaborating on the association. Information that is not connected to anything else is easily lost.

#### *Multitasking*

Because of the decline in working memory, it's more time consuming and wearying for the brain to alternate among tasks than to do them one at a time. But try telling that to a type A personality.

#### *Prospective Memory*

Prospective memory is remembering to do something in the future – like picking up milk on your way home from work. Husbands get this deficit at the time of marriage, but by about age 45, it affects everyone.

#### *Location of Household Items*

“Where did I put my glasses?” They are probably with your car keys, but don't ask me where. I called my husband to see if he remembered what I did with my water bottle. He tells me where he saw the water bottle and I retrieve it. But where is the phone? The good thing about losing stuff at home is at least it's in the house.

#### *Slow Down in Information Processing*

The bad news is that it takes longer to learn new information. If you started to learn Spanish in college and then take a refresher course at senior summer school, it is likely to be more difficult. But the good news is you are likely to retain whatever you learn longer, and the better news is that learning a language is one of the best things that you can do for your brain.

#### *More Good News*

The other piece of good news is that there is wisdom in aging. You tend to have more thorough reasoning and make fewer mistakes – another reason why older workers should be prized the workforce. Not to mention fewer sick days because they were out drinking the night before.

### ***Dementia-Proofing Your Brain***

Unfortunately there isn't a pill you can take to dementia-proof your brain, although the pharmaceutical industry is trying to develop one. But there are things that you can do to keep your brain functioning longer. Brain science has shown that we can generate new neural pathways (neurogenesis) to replace the circuits that are no longer functioning.

### ***If it's good for the Heart, it's good for the Brain***

#### *Diet*

Doing things that are good for your cardiovascular health can have the unexpected benefit of helping your brain as well. According to Dr George Bartzokis, Director of UCLA's Memory Disorders and Alzheimer's Disease Clinic, this may be because when brain cholesterol levels rise, they produce a toxic protein that eats away at the myelin and disrupts the flow of messages. Dr. Gary Small of the UCLA Center on Aging recommends a diet high in protein to keep the brain powered up. Fruits and vegetables of various different colors are high in antioxidants and phytochemicals. Omega -3 Fatty Acids found in salmon, herring and anchovies are also helpful. Other researchers have recommended a Mediterranean style diet complete with one glass of red wine a day.

Caffeine, which has already been proven helpful in the prevention of Parkinson's, may also help our memories. And coffee is not illegal, immoral or fattening, unless you have a frappuccino.

#### *Exercise*

John Larkson, a researcher at the Group Health Cooperative in Seattle, noted that there is an increasing body of knowledge that states that exercise is as good for the brain as it is for the body. His research found that seniors who did as little as 15 minutes daily of modest exercise reduced their risk of developing dementia by 30%. Aerobics are best. Researchers think this is because exercise stimulates brain derived neurotropic factor (BDNF). BDNF increases neural plasticity, the brain's ability to make new pathways.

#### *Stress Reduction*

Anyone who has had their mind go blank during a talk can confirm that stress is not good for memory. Dr. Jay Lombard notes that stress produces cortisol and high levels of cortisol stop cells from using oxygen and glucose, starving the brain. So anything that is relaxing can help - watching a sunset, meditating, knitting and jogging. Find something that you enjoy so that you will do it regularly. There are also psychological protocols like systematic desensitization, self-hypnosis and cognitive restructuring that can reduce stress and anxiety.

#### *Sleep*

Cathryn Jakobson Ramin, an expert on midlife memory decline, describes the benefits of sleep in *Carved In Sand*. During sleep the brain consolidates simple spatial tasks, recollections of personal experiences, visual skills and memories with strong emotional impact. Our sleeping brains work on issues that bother us during waking hours and move information into long term memory.

Creativity and problem solving are processed during slow wave non-REM sleep. This kind of sleep virtually disappears after age 40, contributing to mid-life memory loss.

So if you want your memory to function well, get enough sleep, and if you can't sleep, consult a professional.

#### *Social Interaction*

A recent study by Robert Wilson of the Rush University Medical Center in Chicago found that people who describe themselves as lonely were twice as likely to develop dementia. Not only that, but their brains didn't have the normal plaques and tangles. Instead they had elevated cortisol levels, the kind that researchers associate with aging of the brain.

Aside from our innate human need for interaction people, social interactions are a source of novelty and mental stimulation.

#### *Have Enough Money*

I believe in that old saying "I've been rich and I've been poor and rich is better."

Having enough money to travel and take courses provides new and novel stimulation. You're not worried about how you will pay the bills, so that decreases stress. You don't skip important medical care because you don't know how to pay for it, so you can take better care of your health. You have dinner at that nice Mediterranean bistro instead of at McDonald's, so your diet is better. You can take tennis lessons or have a personal trainer. Sure, a walk at the beach can cost nothing at all, but all other things being equal, it's better to have money.

#### *Take Care of Your Health*

Physical problems can contribute to memory loss. Something as basic as dehydration can cause memory loss and poor judgment. Complications from diabetes, blood pressure and high cholesterol can impact memory. Some medications can impair cognition. That's why they tell you not to take sleeping pills if you don't have 8 hours to rest. Medication interactions can also be problematic.

#### ***Keeping Mentally Active***

The brain needs new and novel stimulation to keep functioning at an optimal level, so anything that you can do to challenge your brain (without overwhelming it) is a good thing. This can be as simple as driving to the grocery store a new way – or trying out a different grocery store. Although as we age learning new things may take us more time, they are great for your brain. Do crossword puzzles, brain teasers, bridge or sudoku. Learn a new language work, take up a musical instrument or take that art class. It's important to involve yourself in different kinds of mental challenges, because different activities are good for different parts of the brain.

Some retirees return to work, not because they need the money, but because they need the challenge. Some enter an entirely new field – they call it “encore careers.”

#### ***Computerized Brain Training***

There is a profusion of computerized programs and other technology to strengthen memory and other brain functions. But not every program is right for every person. If a program is too difficult for you, you are likely to get frustrated and not do it. If a program is too easy for you, you are going to be bored and won't do it. If a program addresses problems that aren't your issues, you won't get what you need. And if you don't like the program, it's not going to happen. Unfortunately these memory programs can be like the treadmill in your bedroom, but you can't even throw your clothes on them.

That's where Sparks of Genius Brain Fitness Center can be helpful. We are personal trainers for the brain. We sort out the latest technological advances and create a program specifically designed for you. We find the technology that's meets your needs, set it to the level that's right for you and support you so that you can reach your goals.

#### ***Compensatory Strategies***

Compensatory strategies are what we do to make up for memory challenges, and they are helpful to people of all ages. You are probably already using them, like having a “to do” list?

You can keep your “to do” list in a notebook or calendar, on your computer or in your blackberry. If you use a calendar, invest in a large one where you can write all the stuff down. High tech solutions are great, and if there is something that you want to organize, there is probably computer software that can do it. But in many situations, low tech works just as well.

Sometimes compensatory strategies are counter-intuitive. For example, a certain husband I know likes to leave things out to “jog” his memory. This is one of the worst strategies, because you end up with clutter. A better solution is to have a place for everything – in other words, file, don’t pile. And make additions to your “to-do” list.

Keeping everything in its place also works for lost keys. Keep them in your purse or on a hook or in an ashtray. (You have to use ashtrays for something now that most people don’t smoke anymore. And if you’re too young to have ashtrays, you’re probably not old enough to be reading this article.) But always keep your keys in the same place. Wearing the item also works. Pin the key to your clothing or wear the eyeglasses around your neck. I have seen some really beautiful necklaces that are really eyeglass holders.

Books have been written about compensatory strategies and right ones can be really helpful. Interestingly, the people who have the hardest time using them are the ones with really good memories who used to be able to keep everything in their heads.

### *Conclusion*

Age related memory loss is annoying, inconvenient and scary. We think it’s a precursor to Alzheimer’s, and this is true in some cases. Age related memory loss is one of many unpleasant occurrences that happen to most of us when we get to a certain age and to some of us well before that time. However that does not mean that you have to lose hope.

We do not have to sit passively by and wait for our brains to decay. We can be proactive and do what we can to slow down, stop and possibly reverse memory loss. We can acknowledge that while there are some memory processes that get worse, when something gets into our memory banks, we are likely to be able to hang onto it longer and make better use of it.

We can use our wisdom to have a better life. We are not as likely to sweat the small stuff and more likely to make the most of the golden opportunities waiting for us in each moment. We may miss the bodies and the minds that we had in our twenties, but do you really miss the angst?

Mickey Mantle said, “If I knew how long I was going to live, I would have taken better care of myself.” While the best time have done this may have been 40 years ago, the next best time is right now. So maybe we could all take better care of ourselves, of our loved ones and of the planet.

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