



JOHNS HOPKINS GUIDE TO MEMORY LOSS AND AGING

BY THE EDITORS OF JOHNS HOPKINS HEALTH ALERTS

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**The Johns Hopkins Guide to Memory Loss and Aging
Dr. Peter V. Rabins**

TABLE OF CONTENTS

Introduction2

Is it Alzheimer's?3

Not So Total Recall As We Age3

Training Your Memory?3

The Method and Results of the Memory Training Study4

New "Memory Habits"4

Is it Age-Related Memory Loss or Depression?.....5

Depression Is Often Underdiagnosed Over Age 505

The Signs And Symptoms Of Depression.....6

Events That Can Trigger Depression.....7

Treatment Options for Depression7

How to Recognize Depression.....7

Maintaining Your Mental Health.....8

Eight Ways to Protect Your Memory8

Conclusion 12

Further Resources 14



**The Johns Hopkins Guide to Memory Loss and Aging
Dr. Peter V. Rabins**

**Introduction:
Age-Related Memory Loss**

Forgetfulness is one of the most common complaints of middle age and beyond. You're in the middle of a conversation about a book when you realize that you can't remember the title or the author's name. You start to introduce your best friend to an acquaintance and suddenly can't remember either name. You find yourself standing in front of the refrigerator wondering exactly why you opened the door.

The difference between normal memory loss that increases with age—known clinically as **age-associated memory impairment**—and serious **dementia** is that the former is frustrating but not *disabling*.

In this guide, we will discuss the differences between **age-related memory loss** and **Alzheimer's Disease** or other forms of **dementia**. We will also give you the latest news on whether or not it is possible to train your brain against memory loss.

In this Special Report, we will also discuss the difference between age-related memory loss and **depression**, which is common in the over 50 population, but is often overlooked or deemed to be a 'normal' part of the aging process.

Finally, we outline 8 practical steps you can take to preserve your memory for as long as possible, with suggested resources for more information.



The Johns Hopkins Guide to Memory Loss and Aging

Is it Alzheimer's?

At the Alzheimer's Research Center at Johns Hopkins, we find that many people think that common forgetfulness signals the onset of Alzheimer's Disease and other forms of dementia. However, it's perfectly *normal* to forget a book title, the names of friends, or what you were seeking in the refrigerator.

What's NOT normal is forgetting what a book *is*, being unable to recall that a person is your friend, or forgetting what goes in the refrigerator, or how to open it. Those are signs of Alzheimer's Disease (AD) or another form of dementia.

Not So Total Recall As We Age

Nearly all of us take more time to learn and recall information as we age. This occurs because the transmission of nerve impulses across cell membranes (synapses) in the brain inevitably slows down as we get older. The decline progresses slowly, almost imperceptibly, over several decades—until by midlife most of us have found ourselves staring blankly into the refrigerator.

Age-related memory changes are *NOT* the same thing as dementia. Age-related changes usually involve gaining access to the memory that is in your brain (that's why you remember the person's name five minutes later, and remember what you went to the refrigerator for when you go back into the dining room).

In fact, although everyone experiences some degree of age-related memory loss, only 1 out of 100 people in their 60s have dementia.

Training Your Memory?

What if you trained your mind, performing a series of mental exercises to preserve and protect your memory? Would it work? The answer so far is ... *perhaps*.

Researchers at Johns Hopkins and several other universities recently examined the effect of cognitive training on more than 450 people aged 65 to 94 with normal memory. This research was sponsored by grants from the National Institute on Aging and the National Institute of Nursing Research, and the findings were published in the *Journal of the American Medical Association*.



Three groups received training to improve memory, reasoning, or processing speed, while the fourth group received no training. The training sessions took place twice a week over a five-week period, with each session lasting up to 75 minutes.

Subjects in the memory-training group were taught how to remember word lists and sequences of items, text material, and the main ideas and details of stories.

Those in the reasoning group learned how to solve problems that follow patterns by identifying those patterns. Speed-of-processing training focused on the ability to identify and locate visual information quickly.

The Method and Results of the Memory Training Study

Researchers assessed the cognitive ability of the study subjects before the training, immediately after the training, and one and two years later. They found that this type of targeted training can significantly improve memory, reasoning, and speed of processing. However, the improvement in thinking did not improve the subjects' ability to perform everyday tasks.

For example, it didn't make people better at things such as understanding medication labels, charts, or forms. It also didn't make them any faster at looking up phone numbers, finding specific items in a grocery store, making change, and responding to traffic signs.

New "Memory Habits"

Still, the magnitude of the overall improvement in the targeted cognitive abilities was equivalent to the amount of cognitive decline one would expect over a 7- to 14-year interval among people of this age. These results show that age-associated changes in memory can be combated by developing new "memory habits," that is, by learning new ways of thinking about what you are trying to remember.



Is it Age-Related Memory Loss or Depression?

Many people who complain about memory problems actually are experiencing symptoms of **depression**. Depression is one of the most common psychological problems, with 17 million American adults experiencing a period of clinical depression each year.

Depression can trigger feelings of sadness, malaise, hopelessness, difficulty concentrating, and contemplation of suicide.

Depression is especially prevalent among older people, particularly those who have developed a physical illness. Even if you have never suffered from depression in the past, you may actually be tormented by it now and not recognize it for what it is.

Depression Is Often Underdiagnosed Over Age 50

In far too many cases, depression is undetected and misinterpreted by those experiencing it. Many people develop depression for the first time after the age of 50. In people over 65, 3 out of 100 have clinical depression at any one time.

In fact, major depression, which affects about 15 percent of the older adult population at some time in their life, is the most common and most treatable psychiatric disorder in this age group—that is, if it's uncovered and brought to the attention of a physician.

Despite its pervasiveness in the older population, it's estimated that primary care physicians fail to recognize as many as **half** of all depression cases.

Even more upsetting is the fact that mental health researchers now believe that 60% of the American public thinks depression is just a part of the aging process, and aren't aware that it's actually a mental illness that can be **successfully treated**.

What Is Depression?

Clinical depression is a brain disorder that affects who you are, the way you think, and how you interact. Unlike normal emotional experiences of sadness, loss, or passing mood states, clinical depression is extreme, persistent, and can seriously interfere with the ability to function.



People with depression cannot will it away, nor can they simply “pull themselves together and snap out of it.” They need professional help.

The Signs And Symptoms Of Depression

A person suffering from depression will likely complain of:

- difficulty in concentrating
- overall feelings of fatigue
- loss of interest in hobbies and friends
- difficulty sleeping, or oversleeping
- early morning awakening
- unexplained sadness or weight loss
- loss of self-confidence
- feelings of worthlessness
- recurrent thoughts of suicide

The highest suicide rates in the U.S. are found in white men over age 85.

Keep in mind also that a man may react differently to depression, and be much less likely to seek treatment.

If a person has five or more of the symptoms listed above, and hasn't been functioning normally for most days during a two-week period, it indicates a high likelihood of depression.

I've found that at least a third of patients I examine who are clinically depressed won't say they feel sad or blue. Rather, they say that they “don't feel well,” “feel different than usual,” or believe that “there is something wrong with me.”

Far too often, however, those with depression, men especially, usually attempt to keep this a secret from loved ones because they don't want to be branded as “mentally ill.” These fears should not be obstacles to treatment.

We think of arthritis, hypertension, and angina as chronic ailments that require medical evaluation and treatment, and we should think of depression in the same way.



Events Which Can Trigger Depression

Major life events, such as illness, job loss, retirement, or the loss of a loved one can trigger depression at any time.

Physical illness or disease triggers some cases of depression in older people. Illnesses of older age associated with depression can include arthritis, parathyroid disorders, Parkinson's disease, pneumonia, heart attack, and stroke.

In addition, one study reported that men at the low end of normal for testosterone levels were five times more likely to be depressed than those with average levels. Having said that, major depressive disorder is more prevalent in women than in men, according to the National Institute of Mental Health.

Treatment Options for Depression

The good news is that treatment for depression is usually effective. The options for the treatment of depression are:

- medication
- psychotherapy
- electroconvulsive therapy
- any combination of these

The first antidepressant medication tried is successful at relieving depression in up to 70 percent of patients, according to the recent STAR*D (Sequenced Treatment Alternatives to Relieve Depression) study results. Psychotherapy alone works in about half of patients; and up to 70 percent of patients improve with electroconvulsive therapy.

How to Recognize Depression

It starts by being observant. What changes have you observed that are out of the ordinary in yourself, or a loved one?

- Is the person more quiet and withdrawn than usual?
- Does s/he appear to be morbid, negative, and complaining?
- Does s/he appear less happy and cheerful than usual, or more easily moved to tears?
- Is there a change in sleep patterns or anxiety levels?



If you notice any of these changes, be supportive and empathetic and urge the person to speak to his physician. If all else fails, make the call yourself. Once identified, most people are successfully treated.

Don't hesitate to seek help if you suspect depression. It is not a sign of "weakness," nor should you be concerned about the social stigma mental illness continues to conjure up for some people. Depression is a serious medical condition that requires treatment.

Maintaining Your Mental Health

Physical illness can trigger some cases of depression. If your memory loss is not related to depression, it could still be connected to some underlying medical condition, or even connected with the medications you might be taking for it.

There are a number of steps you can take to counter age-associated memory loss and reduce the risk of dementia. Here are some suggestions:

Eight Ways to Protect Your Memory

1-Treat high blood pressure.

Over time, hypertension (high blood pressure) can damage brain cells and trigger transient ischemic attacks (TIAs), also referred to as "mini-strokes," that may impair memory. There is nothing "mini" about TIAs, however. Two recent studies reported that a large percentage of people who have had a TIA would go on to have a full-blown stroke.

For a more detailed special report on this topic, "Nothing Minor about Mini Strokes," please visit:

http://www.johnshopkinshealthalerts.com/reports/hypertension_stroke/325-1.html

Contrary to former beliefs, high blood pressure is not a normal or healthy sign of aging. Keeping blood pressure controlled (below 120/80 mmHg), prevents strokes, and maximizes blood flow to the heart and brain. It's estimated that 42 million Americans have hypertension (blood pressure above 140/90 mmHg) but only 10 million have their blood pressure safely controlled.

For more information on aging and high blood pressure, please visit:

http://www.johnshopkinshealthalerts.com/alerts/hypertension_stroke/JohnsHopkinsHealthAlertsHypertensionStroke_583-1.html



2-Eat right.

A balanced diet that contains low-fat dairy products and nine servings daily of fruits and vegetables can improve alertness and energy. Foods rich in omega-3 fats (especially wild salmon, mackerel, trout, sardines, walnuts, and flaxseed) may be particularly beneficial for brain function.

For more information on the connection between nutrition and memory, please visit:

http://www.johnshopkinshealthalerts.com/alerts/nutrition_weight_control/JohnsHopkinsNutritionWeightControlHealthAlert_208-1.html

3-Exercise.

Better fitness translates into better cognitive function. Regular aerobic exercise seems to maintain brain cells and to encourage the growth of new neurons. Exercise also helps optimize blood pressure and increases an important brain protein called brain-derived neurotrophic factor (BDNF).

Animal studies have recently revealed that the more the animals voluntarily exercised on a running wheel, the higher the levels of memory-enhancing BDNF in the brain compared to animals that did not exercise. The nonexercising control group of animals had memory problems but injecting BDNF directly into their brains bolstered memory.

In addition, a study published in the *Annals of Internal Medicine* reported that people who exercised for just 15 minutes a day three times per week had a 32% lower incidence of dementia and Alzheimer's disease than non-exercising subjects. The exercises examined in the study included walking, hiking, bicycling, calisthenics, water aerobics, swimming, and weight training.

For more information on safe ways to exercise at any age, please visit our Healthy Living Section of the website:

http://www.johnshopkinshealthalerts.com/alerts_index/healthy_living/20-1.html

4-Drink only in moderation.

Moderate alcohol consumption (no more than about 4 oz of wine, 1 oz of spirits, or 10 oz of beer daily) may *lower* the risk of severe memory loss. However, studies have reported that people who drink excessively—more than four drinks daily—were 1.5 times more likely to develop both normal memory problems and dementia.



For studies that link alcohol with memory, please visit:

<http://www.johnshopkinshealthalerts.com/reports/memory/66-1.html>

5-Check your medicine cabinet.

Many common prescription medications can impair memory. If you regularly take drugs for ulcers, pain, depression, anxiety, hypertension, Parkinson's disease, a thyroid condition, or any other medical problem and have noticed a decline in memory function, speak to your physician about the possibility of adjusting your regimen in some way.

For a list of the medications that most commonly affect your memory, please visit: <http://www.johnshopkinshealthalerts.com/reports/memory/671-1.html>

6-Get enough sleep.

Sleep deprivation stresses the brain and can affect your ability to concentrate, to learn, and to recall information. Mental alertness improves if you get approximately 45 minutes of sleep for every two hours you stay awake. Lack of sleep has also now been linked to obesity, which can cause additional health problems.

For more information, please visit:

http://www.johnshopkinshealthalerts.com/alerts/nutrition_weight_control/JohnsHopkinsHealthAlertsNutritionWeightControl_306-1.html

In addition, we are now beginning to understand more fully the many dangers of sleep apnea. Snoring may now be a sign of something more serious than just an annoyance for anyone within hearing range of it. To learn more about sleep apnea's multiple risks, please visit:

http://www.johnshopkinshealthalerts.com/alerts/lung_disorders/JohnsHopkinsHealthAlertsLungDisorders_470-1.html

7. Stay mentally active.

People who regularly seek intellectual challenges may strengthen the connections (synapses) between brain cells in the hippocampus (the part of the brain essential to consolidating immediate thoughts and impressions into longer-lasting memories).

Learn a new language, play chess, take a class, practice the piano—and read. Studies show that reading is one of the best brain stimulants, while watching



television is far less effective. While it is still unclear whether these activities will prevent dementia, they are associated with improved quality of life and lower rates of depression.

For our latest articles related to memory, please visit our Memory Health Alerts Topic Page at:

http://www.johnshopkinshealthalerts.com/alerts_index/memory/23-1.html

8. Protect your head from injury.

Avoid situations in which you are likely to fall (like climbing a ladder to change a light bulb). Eliminate household tripping hazards, such as throw rugs, and wear protective headgear for active sports. Studies have reported that people who have suffered severe head trauma were more likely to develop Alzheimer's disease and other forms of dementia.



Conclusion

A certain amount of memory loss is to be expected with age. Most people have more difficulty recalling names and words as they get older, so this is by no means symptomatic of dementia.

If you are occasionally forgetful, an adage can serve to reassure you: “You need not worry if you forget where you put your car keys; you only need to worry if you forget what they’re used for.”

The difference between normal memory loss that increases with age—known clinically as age-associated memory impairment—and serious dementia is that the former is frustrating but not disabling.

If you are worried about memory loss, you are unlikely to be suffering from a serious memory condition. People with serious memory impairment tend to be unaware of their lapses, do not worry about them, or attribute them to other causes.

However, if memory lapses interfere with your normal daily functioning, or if you believe that a loved one's memory lapses are serious, due to depression, or a sign of a more complex cause, a visit to a physician may be in order.



About the Author

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Dr. Rabins has spent his career studying psychiatric disorders in the elderly. He is the co-author of *The 36-Hour Day: A Family Guide to Caring for Persons With Alzheimer Disease, Related Dementing Illnesses and Memory Loss in Later Life* (Warner Books, 2001).

His current research includes the development of scales to measure impairment in people with severe dementia and the study of visual hallucinations in a variety of psychiatric and neurological conditions.



Further Resources

For more information about age-related memory loss, please visit our Memory Topic page at:

http://www.johnshopkinshealthalerts.com/alerts_index/memory/23-1.html

to read the latest articles.

The material in this Special Report is derived from our ongoing series of Memory Publications:

The Johns Hopkins Memory White Paper

http://www.johnshopkinshealthalerts.com/white_papers/memory_wp/digital08_landing.html

The Johns Hopkins Memory Bulletin

http://www.johnshopkinshealthalerts.com/bulletins/memory_bulletin/main08_landing.html



Medical Disclaimer

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