

Can our leisure activities help to prevent cognitive decline?

Janice E. Knoefel, MD; and Janet Jankowiak, MD



As our society ages, especially the baby boomer generation, many are asking, "What can we do to postpone the effects of getting older?" This question applies not only to the obvious changes in how we look but also to our cognitive, or thinking, abilities.

Minor incidents such as misplacing keys or glasses, temporarily losing the car in a parking lot, or momentarily forgetting a friend's name happen so often that we worry that our mind is failing. A good joke to cover up one of these minor glitches is that this is just "old timer's disease." Yet underneath this humor is the fear that, indeed, as we age, we may lose our mental abilities. So what can we do about it? What, if anything, can be done to prevent or delay cognitive decline that may go along with aging? See About Brain Health below.

In the current issue of *Neurology*, a group of researchers from China, led by John Y.J. Wang,¹ posed just such a question. Their results are intriguing. More than 5,000 people, aged 55 years or older, and living in nine randomly selected communities in Chongqing, China, took

part in the study. The subjects were interviewed concerning age, sex, education, occupation, smoking and drinking habits, medical conditions, and medication use. To test their thinking abilities they were given a well-known screening test called the Mini-Mental State Examination (MMSE). Scores were adjusted for educational level. Additional measures were used to look for signs of depression and to assess the level of independence in caring for one's own daily needs, called activities of daily living (ADLs).

Detailed information was collected regarding leisure activities. The researchers wished to know how often these people participated in leisure time activities, for how long, and the nature of the activity. Activities such as playing board games, reading, writing, painting, playing music, dancing, performing drama, watching television, or listening to the radio were classified as cognitive. Other activities were either physical (walking, fishing, running, gardening) or social (visiting friends/relatives or traveling).

The study group was followed for nearly 5 years, repeating the original tests each year. The final analysis looked at life factors such as age, sex, education, occupation, medical conditions, smoking, drinking, depressive symptoms, initial MMSE and ADL scores, and participation in the leisure activities. What did the researchers find?

Over the 5 years, 11% of the people showed a drop in their thinking ability. These people were more often women, had lower education, had been in a blue collar occupation, were currently smoking, were drinking daily, were older, had more medical conditions, started off with lower (i.e., worse) cognitive scores on the MMSE, and had higher scores (i.e., less independence) in ADLs. Except for smoking and drinking, these were factors that generally could not be changed.

The point of the study was to look at the relationship between participation and duration of leisure activities and the risk

for cognitive decline. The study did not disappoint. The analysis showed that playing board games and reading were associated with a reduced risk of developing cognitive impairment. Watching television was associated with an increased risk of developing cognitive impairment. When the individual leisure activities were grouped together, only cognitive activity, and not physical or social activity, was associated with a reduced risk of developing cognitive decline.

The authors added that the top three leisure activities in this study group were watching television, playing board games, and reading. The participation in other cognitive leisure activities (such as playing music, writing, dancing, painting) was so small (about 1/100th to 1/500th the participation rate of television watching, reading, and playing board games) that it is possible that a significant association was present but just not noted because so few people did these activities.

The authors tried to explain why certain cognitive activities increased or decreased the risk for cognitive decline. They suggested that the cognitive activities, but not physical or social activities, had a protective effect against cognitive decline because of mental stimulation (a positive effect) and not just being active. They further speculated that watching television was too passive an activity (did not require enough mental effort) to counterbalance the effects of aging. However, they admitted that those who chose to spend more time watching television may have been more impaired at the start and chose not to participate in other more stimulating activities. Clearly, this study suggests that, like exercising your muscles to stay healthy, the brain does better with more activity. Turn off the television and go play a board game!

Reference

1. Wang JYJ, Zhou DHD, Li J, et al. Leisure activity and risk of cognitive impairment: The Chongqing aging study. *Neurology* 2006; 66:911-913.

When people think of good health, the image of a muscular, lean, young, often beautiful person may come to mind. However, as we age, we come to realize more and more the importance of brain health as well. There are increasing reports about a predicted rise in the number of cases of Alzheimer disease (AD) and other dementias as the baby boomers age. Are there measures that can be taken to lessen this gloomy forecast? Hopefully there are.

What is dementia/Alzheimer disease?

Dementia is a label given when a person has problems thinking and remembering that interfere with his or her normal daily functioning. AD is the most common form of dementia. It makes up about 60 to 80% of all dementia.

What are risk factors for dementia?

Age is a key factor but that cannot be changed. Still, in some ways perhaps thinking young does help. By staying active, the brain, like a muscle, may do better. Heart health is also important. Irregular heartbeats (arrhythmia), heart attacks, and abnormal heart valves may contribute directly to strokes which, in turn, contribute to cognitive decline. In fact, one of the best-known ways to prevent symptoms of AD is to prevent stroke. Stroke may unmask underlying Alzheimer disease, allowing problems of memory loss and impaired thinking to surface earlier.

Some of the major risk factors for heart disease are the same for stroke and probably certain types of dementia. The biggest one of these is *high blood pressure*, which can easily be treated. There is increasing evidence that untreated high blood pressure over a long period can cause changes in the small blood vessels in the brain. This contributes to vascular dementia (usually associated with strokes) and perhaps even to Alzheimer dementia. Most often there are few or no signs of high blood pressure so it is important to have it checked regularly by a health care provider.

Diabetes is another leading cause of damage to the small blood vessels in the brain. Recent research suggests that even at a stage before full-blown diabetes is recognized changes may be occurring in brain blood vessels. This may result in subtle problems with thinking.

Smoking is another factor that is associated with damage to brain blood vessels. It is well known to increase the risk of heart disease and stroke and probably contributes to vascular dementia as well.

How can you decrease your risk of dementia?

Some of the same things that are good for maintaining good physical health also help your brain stay healthy. These include what you eat, how physically active you are, and probably how you use your brain (both in avoiding risky behaviors and staying mentally active).

What about diet?

So many different theories exist about what foods are good or bad that it is hard to know what advice to follow. However, it is clear that the obesity epidemic in the United States is a major problem. Obesity is, by nature, associated with an increased risk of diabetes and high blood pressure, both risk factors for certain types of dementia. Probably the wisest solution is to eat “in moderation.” That is, do not eat too much of any one type of food and do not take big helpings or seconds. It seems that eating lots of different fruits and vegetables (at least six to nine servings per day) is a good idea. Fatty foods, including red meat, should be eaten in much smaller amounts. Some research suggests that eating fish two to three times per week is good for the brain. Avoiding drinks with a high sugar content (sodas, fruit drinks) is also a good way to keep off unwanted pounds. Substitute by drinking lots of fresh water (eight cups of liquid per day is recommended, more in hot weather). There is some research that suggests that a small amount of alcohol daily may be a good thing, i.e., one glass of wine for a

woman, two for a man. However, if you do not already drink alcohol it may not be a good idea to start, as there can be other risks associated with alcohol.

What about activity?

Exercise is a bad word for many people because they think of being hot, sweaty, and tired. Fortunately, studies suggest that you do not necessarily have to do intense exercise to get good results. Simple walking, going up and down stairs, gardening, and doing housework can all count. The importance is to stay active, to move around on a regular basis. Try to find an activity that you enjoy or try a new one: dancing, swimming, tai chi are examples. Doing an activity regularly with a friend or group of friends has many added benefits.

What about brain exercise?

Staying mentally alert by challenging yourself seems to be very helpful. Learning new hobbies such as needlework, playing board games, and carpentry are a few examples. Reading and solving crossword puzzles are also great. Activities that require you to use your imagination, memory, and mental flexibility are probably much better than passive activities like watching television. Socialization also keeps you young longer. Studies suggest that people who attend religious services and are active in their communities are happier and tend to live longer.

What about depression?

Depression is common in the elderly and may be associated with dementia. Feelings of depression can unmask symptoms of cognitive decline and contribute to poor social and psychological function. Most cases of depression can be treated with either supportive counseling and/or medications.

Brain health depends on staying active: use it or lose it may apply to the brain as well as to muscles.

For more information

American Academy of Neurology
Foundation: www.thebrainmatters.org
Alzheimer's Association: www.alz.org

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