RESOURCES

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Do Not Go Gently into the Night

PREVENTION OF ALZHEIMER'S IS WITHIN OUR CONTROL.

by Amy Klein

Alzheimer's disease afflicts an estimated 33.9 million people worldwide—5.3 million in the United States alone. Most cases begin after age 65. But the condition is not inevitable. In his new book, *The Alzheimer's Prevention Program: Keep Your Brain Healthy for the Rest of Your Life* (Workman, 2012), UCLA psychiatry professor Dr. Gary Small, director of the Longevity Center at the Semel Institute for Neuroscience & Human Behavior, is boldly challenging the widely accepted theory that Alzheimer's is not preventable. Also the author of a previous best seller, *The Memory Bible* (Hyperion, 2002), Dr. Small recently spoke with *Brain World* about how to delay the onset of the disease to the point that people never experience any symptoms.

BRAIN WORLD: *Why are you interested in Alzheimer's?*
DR. GARY SMALL: I have spent most of my career studying and caring for patients and families suffering from Alzheimer's disease. Early on in my studies, I realized that the most effective strategy to slow down brain-aging would be to try to protect a healthy brain rather than attempt to repair one that is already damaged. As we continue to search for new medicines that may protect healthy brain cells and prevent or cure Alzheimer's disease, compelling scientific evidence points to lifestyle choices we make every day that could have an impact on our brain health and cognitive abilities and delay future mental decline. These strategies have no risk and improve our quality of life and general health. People are becoming aware of the connection between lifestyle and brain health, but the challenge is to actually make the step to change our daily lives and make a brain-healthy lifestyle a habit for the long haul.

BW: *What is Alzheimer's disease, and how does it work in your brain?*
GS: Alzheimer's disease is the most common cause of memory loss and cognitive decline in older individuals. It has a gradual onset and progression that eventually leads to deterioration of most mental abilities, so that patients become fully dependent on others. In the brain, the disease begins with an accumulation of abnormal protein deposits, known as amyloid plaques and tau tangles, in regions controlling memory and other cognitive abilities. Inflammation and other factors contribute, eventually leading to brain cell dysfunction and the mental symptoms of the disease.

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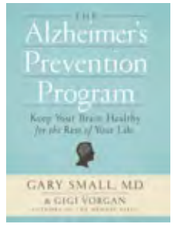
BW: *How can a person distinguish between normal and worrisome memory loss?*
GS: With normal aging, people notice that their memory is worse compared to when they were in their 20s or 30s, but the changes don't really interfere with their everyday functioning. When memory symptoms become frequent and interfere with a person's work or social life, then it is important to seek professional help to find out what's going on and what might be treatable.

BW: *What is the Alzheimer's Prevention Program? How does it work in the brain?*
GS: The Alzheimer's Prevention Program is a lifestyle strategy that includes physical and mental exercises, stress management methods and a healthy-brain diet. The book presents the scientific evidence supporting the program, details the first seven days and offers feedback assessments to help people see early results and motivate them to continue the program for the rest of their lives. The scientific evidence suggests that these strategies strengthen neural networks, increase the delivery of nutrients to brain cells and keeps those cells active and working effectively.



BW: *What are the best mental practices one can do to prevent the disease?*
GS: Many studies have shown a connection between stimulating mental activities and a lower risk for developing Alzheimer's disease. The best exercise depends on the individual—it should be enjoyable and challenging. Most people like to vary their exercises to keep them interesting. In addition, memory-training techniques are easy to learn and have been found to improve memory performance abilities, even years after people complete a memory-training course.

BW: *What are the best emotional practices one can do to prevent the disease?*
GS: Chronic stress causes wear and tear on our neural circuits and often contributes to cognitive impairment as we age. We can't eliminate all the stress from our lives, but we can learn to manage it in a way that protects our brain health. Getting a good night's sleep reduces chronic inflammation, improves memory and makes us more resilient when dealing with stressful events. Another important strategy is to minimize multitasking with our electronic gadgets in order to improve mental focus and lower stress levels. Taking breaks throughout the day for meditation and breathing exercises can help. Some people enjoy yoga, t'ai chi, physical exercise or support from friends for maintaining emotional balance. Also, becoming realistic about how much work we take on and planning ahead to eliminate sources of stress that we can control are helpful strategies to reduce stress.

BW: *What are the best food practices one can do to prevent the disease?*
GS: Recent studies provide a guide on healthy brain-nutrition choices that may lower risk for Alzheimer's disease. Complex carbohydrates and whole grains are brain-protective. Another suggestion is to try eating fish twice a week, to get enough omega-3 fats to protect brain health and stabilize mood. You also can keep your brain healthy with antioxidant fruits and vegetables, as well as protein from poultry, fish and soybeans.

BW: *What are the medical hopes for the future when it comes to Alzheimer's? Will this ever be eradicated?*
GS: Scientists have been focusing on drugs and vaccines that prevent or reverse the deposition of the abnormal amyloid proteins in the brain. Other treatments are being developed to disrupt the tau tangles, inflammation, oxidative damage and other abnormal processes associated with Alzheimer's disease. I am optimistic that in the next decade we will see some important breakthroughs in the development of vaccines or drugs that protect healthy brain cells longer and complement the healthy-brain lifestyle that appears to delay the onset of symptoms. B

Book Roundup

by David Yang

Future Babble: Why Pundits Are Hedgehogs and Foxes Know Best

by Dan Gardner
(Plume, 2012)

The world will end in 2012. Or will it? Prognostication is a rife, global passion and pundits provide inexhaustible commentary on the future—whether on the economy, climate change or anything in between. Journalist Dan Gardner peers through the lens of cognitive science to expose the predictions industry and show us why the most confident experts are more often wrong, while those less so more often get it right.

Plowing through decades of failed predictions, Gardner then focuses on the research of Philip Tetlock, a professor of psychology who set out to examine the predictive power of 284 experts. Allowing only affirmative or negative answers coupled with a percentage (0–100) stating how confident they were, Tetlock arrived at an answer after 27,450 predictions. Apparently, a dart-throwing chimpanzee would have done just as well in many scenarios. Gardner says the simple and disturbing truth is that "experts' predictions were no more accurate than random guesses."

However, the future of prediction is not that dire. While monkeys gave some pundits a challenge, others had more solid results. The presence of an identifiable, differential

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