

# Ageing Slower – with Brain Power

Dr JOHN ARDEN is a leading expert in brain health psychology. Author of 13 books, such as *The Brain Bible*, *Rewire your Brain*, and *Brain-Based Therapy with Adults*, he is the director of mental health training for the Kaiser Permanente Medical Centers in Northern California. He spoke to OLGA YOLDI.



**Your study of neuropsychology has inspired you to integrate neuroscience and psychotherapy, synthesising the biological and the psychological into a new vision for psychotherapy. *The Brain Bible* is your new book. What is it about?**

*The Brain Bible* is based on the most recent developments in neuroscience that have identified the key lifestyle factors which can control or have positive effects on the length and quality of our lives.

It builds on the latest neuroscience research such as neuroplasticity (how the brain can rewire) and neurogenesis (the birth of new neurons) and provides practical advice to improve the functioning of the brain. It is for anybody who wants to know about how to keep their brain healthy. The five factors identified in the book have been heavily researched by neuroscientists and if you practise them over a life time you will not develop dementia symptoms as soon as other people who do not maintain these lifestyle practices. Since these lifestyle factors are so critical you will also not suffer as much from anxiety and depression.

**How is this different from your other books?**

My other books, like *Brain-Based Therapy* and *Rewire your Brain* are more focused on applying therapeutic techniques to change the brain. This book is more geared towards identifying healthy lifestyle practices and how to build a foundation for resiliency. Without establishing and maintaining the factors, your efforts to develop mental health would be like building a house on sand.

*The Brain Bible*, therefore, describes the five factors that promote a healthy brain. It is for people of all ages who want to know about the science behind the factors and is written in a down-to-earth manner. Readers will learn about how to maximise their potential and avoid the brain degrading habits.

**Ageing successfully just doesn't happen by itself, it takes effort and knowledge. What happens to our brain as we age?**

Roughly after age 29 our brains do not respond as quickly as they had previously, but we still are able to absorb much information over our lifetime. While we are not as quick, we have a broader perspective and we are wiser. If we can be wiser about our health our decline won't be as steep.

For example, around age 55 there begins a divergence in aging patterns between people. Some become very unhealthy while others tend to thrive. Those that fail to practice the healthy brain factors identified in the book age faster. On the other hand, those with healthy

lifestyles don't tend to age as quickly. We see amazing differences between these two groups. By age 65 those that don't maintain healthy lifestyles might look as if they were 75 years old, while the others might still look as if they were 55.

**Those people that have already been diagnosed with dementia, what advice would you give them?**

There are factors that can slow down the dementia process even in the early stages of the onset of the illness. If you have good living practices before dementia you may delay it, maybe avoid it.

**Those factors are a fundamental aspect of your book. They are what you call the SEEDS. Could you explain what it means?**

If you plant SEEDS you will have good brain functioning. SEEDS is a mnemonic which stands for social connections, exercise, education, diet and sleep. These are fundamental for a healthy life and for ageing well.

Social connections are what make us human. Our species have been able to thrive and evolve in this planet because they have worked together to survive. So we have developed brain networks, social networks that enable us to thrive. Because we are fundamentally social creatures, we thrived on this planet, because we worked so well together. We have a social brain network and if it is not kindled through good attachment relationships and intimacy we get depressed, we get anxious and even the ends of the chromosomes (called telomeres) shrink. When the telomeres shrink too quickly the result is accelerating ageing.

People affected by trauma particularly need to have good quality relationships. We tend to be healthier in positive relationships, and falter when we are not and get lonely. We know that when old people get lonely they get depressed and get dementia symptoms faster.

Exercise is the most powerful anti-depression and anti-anxiety agent that we have available. With exercise you release a protein called brain-derived neurotrophic factor, which results in the generation of new neurons in the hippocampus, which is an area of the brain responsible to lay down your memory. Exercise is an evolutionary imperative because 11,000 years ago we were hunters and gatherers and moved 10 miles a day. We had the same bodies but we don't do that now. Thus, you could say that exercise is an evolutionary imperative.

Education represents the second "E" of SEEDS. By engaging in ongoing learning we build cognitive reserve. This is a concept that essentially means that

## Minister for Mental Health visits STARTTS office

lifelong learning enhances brain structure, reduces risk of dementia, and increases longevity. A variety of cognitive skills can enhance or be enhanced by attention, working memory. Memory improvement is intertwined with how education supports brain circuits that enhance storage and retrieval of long-term memory. There are a variety of memory-enhancing techniques including using associations and mnemonics that are helpful for ongoing learning.

Diet is also fundamental for a healthy brain. Because many people have maintained an unhealthy diet there is now an epidemic of health problems including metabolic syndrome, which leads to brain impairing conditions such as type 2 diabetes and other medical problems. This is due to the fact that people who don't eat well impair their bodies including the structure of their brain and their neurochemistry that our brain uses to produce complex thoughts. The cornucopia of our brain chemistry depends on a nutritious and varied diet. So it is important that we eat well and eliminate from our diet simple carbohydrates such as sugar, white flour, white rice, as well as fried foods, which contain trans-fatty acids.

Sleep is the fifth healthy brain factor. Though good quality sleep is crucial to brain health it hasn't received the attention it deserves. Maintaining access to each of the stages of sleep is really important to our health. However, many people unfortunately believe that if they can get "some" sleep they are ok. They don't understand that the stages of sleep are so important for our longevity, immune system, memory, and for the growth of the brain.

I am referring to the slow wave sleep and REM sleep. Currently there are too many sleep depressors many people consume like alcohol which taken in the evening depresses slow wave sleep. Those people who are on the computer late at night are looking straight at the light of the screen which results in the suppression of the secretion of a hormone called melatonin and as a consequence creates insomnia.

There are a variety of sleep promoting techniques. For example, if you take a walk in the late afternoon

or evening the levels of stress hormones like cortisol go down, while the rebuilding neurochemicals that help you regenerate your brain go up including the neurotransmitters that help you get to sleep. Also maintaining a lower body temperature is very important. A lot of people don't, are over-covered with too many blankets in bed which raises their body temperature and causes shallow sleep. Keeping your body temperature cool at night is critically important for the quality of sleep.

What you eat at night has a major factor on your sleep. For instance, eating simple carbohydrates, such as sugar, will promote poor quality sleep. Because simple carbohydrates turn into glucose in the middle of your sleep cycle, your sleep won't be quite as deep.

All of the SEEDS factors are even more fundamentally critical for people who have been traumatised. If they don't get good quality sleep, exercise on a regular basis, maintain a good diet, and are not learning something new, they are building a house on sand. Psychotherapists need to work with their clients on helping them in planting SEEDS. Teaching healthy brain practices is absolutely critical for people who have been traumatised. They desperately need these behaviours in place so the therapy can be built on firm ground.

### How about the care of the soul?

The care of the soul is embodied in the care of the brain and the body. I think you can still be spiritual and believe in the importance of the brain. In my book *Science, Theology, and Consciousness* I explored spirit-

uality. I addressed the main theologies and the history of them. I tried to make sense of all them from a scientific, evolutionary and philosophical perspective.

I am a strong proponent of spirituality. But I don't believe we need to transport ourselves to another world to be happy. This can be a pretty good world as it is. I believe the care of the soul is about the care of one another, the care of the body. You need to keep your body and mind healthy. Buddhists and Hindus thought the same in their practice of meditation and yoga. Jesus said that your body is your temple. We should make sure that our temple is healthy. ☩

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PHOTO: Ryan Stuart

The NSW Minister for Mental Health and Assistant Minister for Health Jai Rowell visited STARTTS on the 22nd of September. The Minister met with senior staff and was also able to tour the office, taking the opportunity to chat to some STARTTS staff about their work.

“It was great to learn about the services provided by STARTTS and how refugees’ experiences of severe trauma from war and violence can be overcome with treatment and support,” Mr Rowell said. “The STARTTS staff are doing a great job in meeting the needs of traumatised refugees, the majority of whom are resettling in Western and South Western Sydney.”

STARTTS CEO Jorge Aroche was very pleased to be able to showcase STARTTS’ work. “Over many years STARTTS has seen time and again that, given the right support, refugees can overcome experiences of trauma and make an important contribution to our society. Today’s meeting was a great opportunity to demonstrate how we help our clients rebuild their lives.” ☩