

Investing in your Long Term Quality of Life

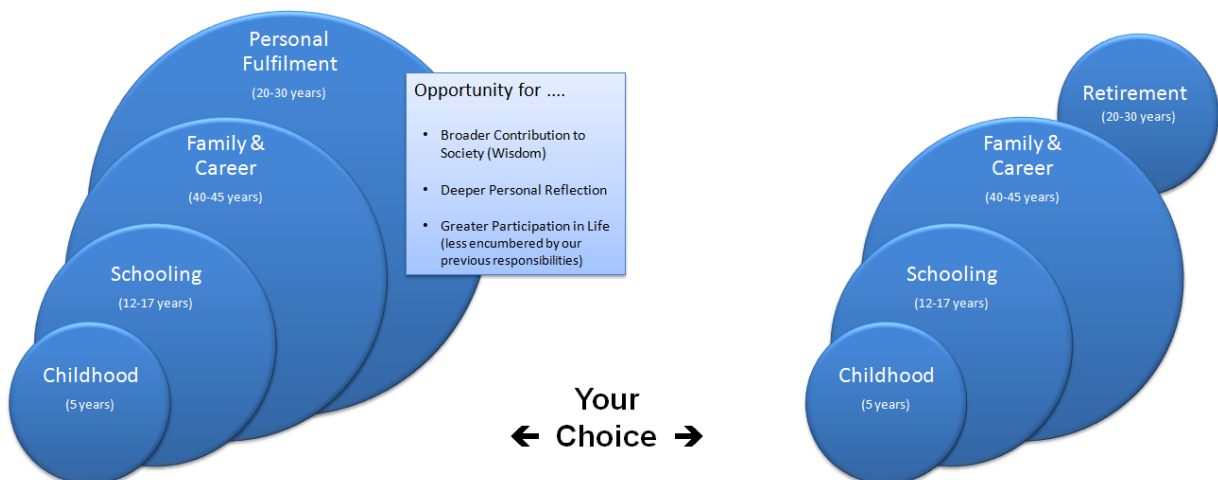
The Australian Institute of Health and Welfare's Report (June 2010) confirms that once we have reached the age of 65 we can expect on average to live another 20 years. That's almost a quarter of our lives, a very substantial period of our time.

Science has added these years to our lives, but **WE** are responsible for adding life into those years. Rather than experience this period as decline, we can now leverage that same body of medical knowledge to help us remain physically and mentally fit enough to enjoy a meaningful life well into our "retirement" years. Those years should be filled with the rich, creative and flourishing experiences that we actively choose to have.

Because our family and career aspects of life are mostly completed or nearing completion at this time, personal development and community activities can be given more priority. People are in a better position to be truly world citizens during these two decades of life. It is recognised that older people have unique talents in :

- Being a resource for wisdom, having accumulated a breath of life experience
- Post formal thought, openness to complexity, dealing with uncertainty, inconsistency, imperfection and compromise
- The desire to contribute their own personal legacy
- Volunteering and citizenship, being socially instrumental in community based programs
- Having sufficient life experience to make better decisions in situations with apparently contradictory contingencies
- Identifying areas of unmet need in community and in developing strategies to fill the need, particularly in areas where more formal services are under strain

The Stepping Stones of Life



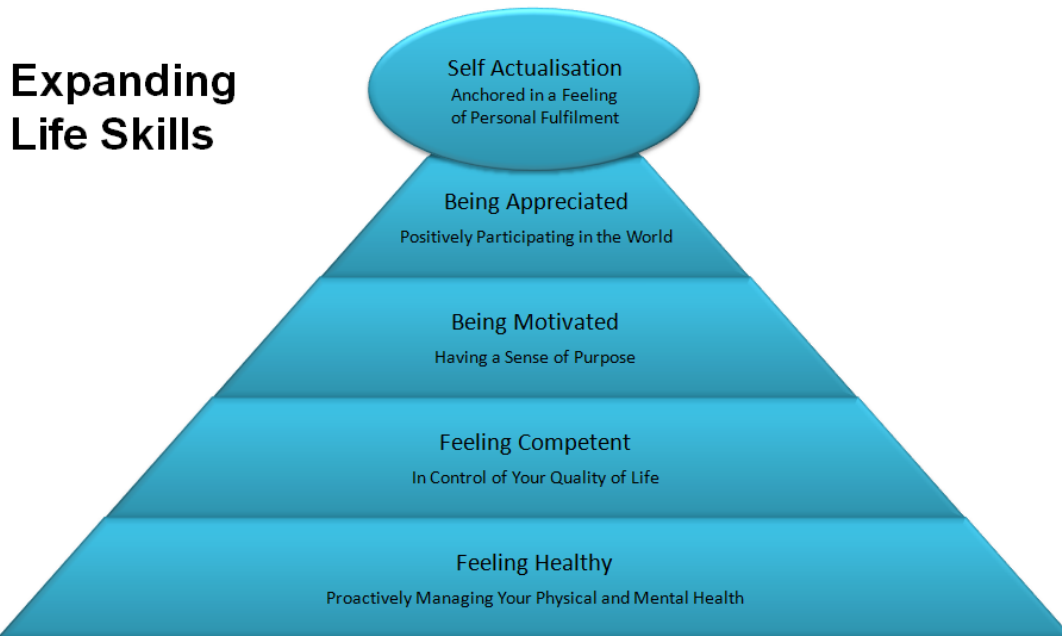
It is important that we maintain our independence and continue to enjoy a life full of rewarding experiences. But to do this we need to maintain a strong platform of good health from which we can actively engage in life. So in the second half of our lives, a more comprehensive personal fitness regime is required that mutually builds the capacity of both mind and body. Our focus should be on developing a more holistic wellness plan with the goal of being able to energetically engage in life both physically and mentally for as long as possible.

Most people now accept that proactive ageing is a good idea. We know that staying physically fit will help us remain healthy into our later years. Most people are also broadly aware of what they need to do to remain physically healthy. But for the public, mental fitness still remains a bit of a mystery, even though the associated health factors are understood by the medical and scientific community. It is also well known that the changes in our brains which result in dementia related illnesses start decades before any symptoms appear. Like neglecting the health of our body, damage builds up over time and we often only become aware of it much later when symptoms start to appear.

We reach our biological peak at around age 30. After that, both physical and mental decline are inevitable. But much of the rate of that decline is within our control. Recent developments in neuroscience demonstrate that the brain is as adaptable as our physical bodies and that the right training provides tangible and measurable benefits in sharpening up our mental capabilities. Brain fitness like physical fitness is achievable if the right combination of activities is undertaken.

We know that by regularly exercising our cardiovascular system we reduce our risk of heart attack. Similar evidence has emerged that by continually challenging our brains with novel activities and learning new skills, we can build additional capacity, called cognitive reserve, which reduces our risk of brain related illnesses later in life. Intellectual stimulation keeps us mentally sharp in the areas we exercise and helps build up these reserves. Hence the phrase "use it or lose it".

We often think of our youth as a time of learning and our old age as a time of mental decline when we start being more forgetful. But this is not how the brain works. The brain is capable of continuously developing throughout life if we actively work it. Indeed as we age, brain exercise becomes more important because it is needed to maintain the mental facilities we are used to. This means that ongoing learning for older adults is just as important as for younger people. Indeed, because of the effects of the age related cognitive decline that we all experience, brain training from mid life is even more crucial to maintain our vitality. Without it we begin to lose the underlying platform for extending our life skills and the capability to pursue new interests. Subsequently we reduce our opportunities for greater participation in the world.

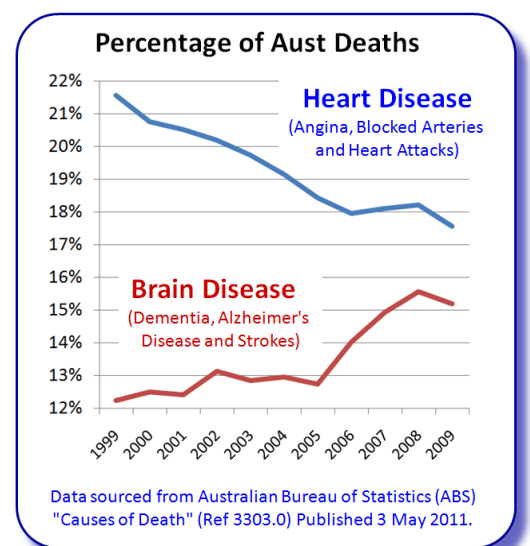


Australia, like most countries in the western world has an ageing population. “This means that the proportion of people aged 65 years or over is projected to increase from 13 per cent in 2010 to 23 per cent by June 2050” (Aust Govt’s Intergenerational Report 2010). But while Australians are ageing, many of us are rightly refusing to grow old and become frail. Baby boomers in particular are likely to demand much more from their expected two decades in “retirement” than their parents did. But to experience this quality of life we need to start right now to invest in and protect the mental capital we have built up, or risk losing it.

People are living longer, and the sad truth is that this means that the prevalence of dementia is increasing and just like heart disease we are all at risk. The Australian Institute of Health and Welfare’s Report shows that deaths relating to heart disease and cancer have been decreasing over the past couple of decades but unfortunately dementia related illnesses are increasing. A 2009 Access Economics report shows that you have a 1 in 3 chance of the disease if you live into your 90’s. The same report also states that “Dementia is one of the fastest growing sources of major disease burden, overtaking coronary heart disease in its total wellbeing cost by 2023 By 2020 there will be around 75,000 baby boomers with dementia”.

Although there is no cure for this disease once it strikes, we do need to know that it is not an inevitable consequence of ageing. The good news is that we can start to take greater control of this issue as well. Early intervention and prevention is the key. Like our physical health there are a number of things we can do to strengthen our current mental abilities and consequently reduce our long term risk.

Our brain is the most complex structure known to man. It contains more than 100 billion neurons (brain cells), each of which is connected to around 10,000 other neurons. That’s one million billion connections that need to be maintained - a truly astounding number. This vast network of neurons controls all of our body’s functions, from our heart rate, breathing and moving, to our sight, hearing, touch and emotion, and onto our consciousness, memory and thinking. Ultimately, it shapes our thoughts, hopes, dreams, and imagination. It is what makes us human. So far no one has ever managed to find a limit to either its processing power or what we can remember. It is potentially our own personally unlimited resource, if we choose to invest in it.



In the past decade neuroscientists have discovered a number of important things about how our brains work :

1. Our brains continue to develop until we die (neuroplasticity)
2. By being mentally active our brain develops additional capacity that helps protect it from deterioration and illnesses (cognitive reserve)
3. Our Brains are not monolithic – the brain has many cognitive domains each helping to perform a different mental function and these capabilities vary considerably between people (our skills and deficits)
4. Performance in each of these cognitive domains can be enhanced if correctly trained as a specific skill

This means that different parts of our brain are recruited for all the different capabilities and skills we have. Different sections of our brain are specialised for each part of our body. Different segments of our brain process each of our senses. The portion of our brain that deals with emotion is different from the piece that performs planning and organisation. The section of the brain that performs math is different from the area that understands language, which is different from the part that helps generate our memories, and so on.

Performing mental exercises is a good way to activate various parts of our brain. Doing crosswords activates the parts of our brain required to generate language. Sudoku activates different parts of our brain, those required to do numerical calculations. But our brain is capable of so many more functions and one or two mental exercises are not enough to keep all parts of our brains healthy. Novelty and variety are crucial to our brain health.

So just like our physical body no one single training exercise will strengthen our entire brain. Every person is different. People generally have different backgrounds, education and life experiences. Therefore each person develops a different set of skills as they go through life. This includes quite varied mental capabilities and a different rate of learning in each of these domains. So a personalised training program is necessary to be effective. One that focuses on your less productive skills to more effectively expand your overall cognitive proficiency. But not exclusively, a broad brain workout provides the best results. Like physical fitness, cross training is to be encouraged, delivered with challenging but enjoyable activities that we want to continue doing.

Now we can tailor personalised brain fitness programs to best suit individuals. Neuroscientists have found ways to effectively measure and exercise specific mental skills (with tangible results), efficiently (over a reasonably short time) and have found that with the right training, the benefits last a relatively long time as compared with physical exercise and muscle development.

This helps to develop our cognitive reserve, which can be thought of as a savings account for the functionality of our brain. It is the ability to build up a resistance to mental decline and disease. The effect is similar to how physically fit people are more resilient against the common illnesses that unhealthy people generally seem to catch more often. The idea is that the stronger the neural networks in our brain the more reserve capacity there is to deal with the normal cognitive decline that we all experience with ageing and to help protect us against dementia. This reinforces what doctors have been advising us for years - "use it or lose it".

Like financial planning, you should ideally begin preventative health measures decades in advance. It's never too late to start but those aged 50 should already be actively engaged in delaying your age related mental decline. In the second half of our lives, a more comprehensive personal fitness regime is required that mutually builds the capacity of both our mind and body. A few simple lifestyle adjustments can help protect our independence and quality of life ensuring that our final two decades are filled with the rich, creative and flourishing experiences that we actively choose to have.

About the Author

Steve Zanon is a member of the SharpBrains Global Council, an international group of neuroscientists and training providers working on scientifically validated cognitive enhancement programs that have had their credentials published in peer reviewed scientific journals. The Healthy Brain Program is an initiative of his company, Proactive Ageing to introduce brain health services to the public. The objectives of the program are to :

1. Maintain links with the leading scientific institutions across the world investigating brain health.
2. Ensure that the public have as much information available about how to keep their brain healthy as they do for physical fitness and maintaining a healthy heart.
3. Educate the public about how enormously adaptable (plastic) our brains are and the benefits that can bring to everyday life.
4. Provide a brain fitness service sharpening our mental abilities and raising cognitive performance in targeted domains with tangible results and personally measurable outcomes.
5. Giving you the skills to protect and extend the mental capital you have accumulated through life.

To discover what you can start doing today to tune up your brain, go to www.proactive-ageing.com.