

Brain Fitness: keeping sharp

Even though 'Brain fitness' is not a recognized medical term it is an extremely popular concept (just Google it and see). The good news is that there are a number of things we can do to help keep the mind mentally sharp and alert, irrespective of age.

In his book *Stay Sharp with the Mind Doctor* Ian Robertson asks how would you best describe yourself out of these four possibilities:

Do you consider yourself

1. Middle-aged?
2. Late middle aged?
3. Old?
4. None of the above?

There is consensus that no matter what age you are between 50 and 80 the correct answer is four - none of the above! Why is that? This is because terms such as 'middle-aged' and 'old' have lost their meaning owing to the dramatic changes that have taken place in our brains and bodies over the last generation. That's a major change from our parents' generation when 60 was regarded as old and 50 late middle -aged. There used to be the perception that at age 65 the individual no longer mattered and was no longer relevant. In developed countries we are now living 30 years longer than we were at the beginning of the 20th century and it is estimated that by 2050 more than 20% of humanity will be 60 or older. And the fastest growing segment of the world's population is the very old with some estimates of centenarians projected to reach nearly 6 million by 2050.

What happens as we age?

In 1961 microbiologist Leonard Hayflick, made a depressing discovery. He found that most human cells are able to divide only a limited number of times, so that even if we get through life without contracting a single disease we'll die when enough of our cells cease dividing. Although our life expectancy continues to increase, by two to five years per decade in the developed world, the Hayflick limit would appear to limit us to a maximum of around 120 years. A striking example is France's Jeanne Calment. She held the world longevity record of 122 years old before dying in 1997. Famously vibrant, she bicycled until she was 100, and at 121 released a CD of reminiscences set to rap and other music!

Neuronal plasticity...sculpting the mind

One of the most fascinating advances of modern neuro science is the realization that the brain circuitry is not hard wired but is significantly modifiable by experience. The brain is pliable, plastic and changeable throughout our lifespan irrespective of genetics. As we learn new skills, we are really physically "sculpting" the mind. And we can dispel the myth that you can't teach old dogs new tricks. You *can* teach old dogs new tricks ... it may just take a little longer!

Seven 'brain fitness' tips:

1. **Stay relaxed and unstressed as possible.** Distraction and worry causes poor memory. When we are fearful the brain 'freezes up', we don't listen properly and our mental ability is impaired. Ever come out of a consultation with your doctor about a worrying medical condition and you can't remember exactly what he or she has told you?
2. **Exercise.** Brain power is boosted by physical exercise which benefits the frontal lobes essential for mental sharpness, the area that ageing attacks the most. Described as the wonder drug for the over - fifties, exercise keeps you more mentally agile and less forgetful.

3. **Large doses of ‘vitamin F’ (Friends!).** Studies show that people with an active social life are less likely to develop memory loss. A strong social support system with a stable circle of friends is vital for mental health with the happiest people being those who enjoy strong relationships.
4. **Be a lifelong learner.** Keep learning. Keep your curiosity alive. Learning together with challenge and change, literally grows the brain.
5. **Importance of meditation/prayer.** The normal process of ageing involves the thinning of the brain cortex affecting memory. What has to be good news is that studies show that long term meditators have a thicker cerebral cortex in those areas involved with attention and sensory processing. Admittedly, those in the study meditated for an average of six hours a week over nine years! ‘Life is fragile, handle with prayer’ seems to make more sense than ever.
6. **A sense of purpose and meaning in our life.** We need a sense of purpose. It is the traction of life. As a friend tells me, he needs more than a full bladder as the reason to get up in the morning! Okinawa known as the longevity island, has more people over 100 years of age than anywhere else in the world. There is no word for retirement in their culture. Instead they have another word, "ikigai", which translates roughly to "purpose" or "that which makes one's life worth living." "What makes your life worth living? We need to identify and maintain a sense of purpose whether it is being involved in a cause bigger than ourselves, doing a small kindness for someone or perhaps just enjoying our favourite hobby.

7. **Pay attention.** Paying attention is an important component of a good memory. Do we hurry through life without pausing to really to stop, look and listen?

Don't just swallow: **TASTE**

Don't just think: **FEEL**

Don't just look: **OBSERVE**

Don't just exist: **LIVE**

We all want to live a long healthy life with a prefrontal cortex that continues to grow so that we can stay as mentally sharp as possible. It can be done. Franz Liszt, the 19th Century composer, was composing some of his remarkable music at 70, Michaelangelo was well in his 70's when he completed the '*Conversion of St Paul*', the great American architect, Frank Lloyd Wright, was designing some his greatest buildings in his 80's while at age 88 Clint Eastwood Eastwood directed and starred in the 2018 film *The Mule*. When was asked about his relentless energy at an age when many are content to sit Eastwood said, "I just get up every morning and go out. **And I don't let the old man in.**" Inspiring stuff.

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