

- Brain / Memory**Keeping active for better cognition**

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ACCORDING to the World Health Organization (WHO), approximately 70% of the global burden of neurological and neurodevelopmental conditions affect low and middle-income countries. Neurological conditions are the leading cause of disability and the second leading cause of death in the world with nine million deaths annually.

Stroke, migraine, dementia, meningitis and epilepsy are the top five contributors of neurological disabilities globally, with an increase in ageing populations, Alzheimer's disease and Parkinson's disease becoming more significant.

MSU Medical Centre's medical director and consultant neurosurgeon Prof Dr Badrisyah Idris explains, "The brain is a unique organ with three important functions that affect our lives which are, (i) sensory interpretation and movement control; (ii) cognitive, mental and emotional integrity; and (iii) behaviour and social execution."

Brain health is becoming an important concept in healthy living which encompasses the ability of the brain to rewire during the life in response to changes in experience and environment. A healthy brain is capable of slowing down cognitive decline and combating any injury or diseases of the brain. There are a number of things that we can make a habit of to maintain our brain health.

Regular physical activity can benefit the brain by optimising brain blood flow and reducing loss of brain cells during ageing. Those who exercise regularly can enjoy healthy cognitive abilities and have a lower risk of developing dementia. Exercise also helps lower blood pressure, reducing cardiovascular risks of getting a stroke.

Some studies have found that regular exercise increases the level of protein that promotes growth and maintenance of brain cells. Having an active lifestyle such as taking the stairs and participating in sports or physical activities such as brisk walking or aerobic training can have a positive impact on brain health.

Quality sleep is important for brain healing and restoration of mental function. Sleep makes our thinking processes sharp and focused with better decision-making. Seven to eight hours of sleep gives the brain adequate time to clear abnormal proteins that accelerate dementia. Several lifestyle measures can be adopted to ensure no alteration in sleep patterns such as increasing time in the sunlight, consistent sleep routines and gaining knowledge about the effects of medications.

Even though the brain is only 2% of the body weight, it consumes 20% of energy requirements. Without the right energy and nutrients, the brain will start losing its function. Food which is rich with antioxidants (compounds that have a protective effect on the brain), fibre, unsaturated fats (including omega-3 fatty acids), B vitamins and an adequate amount of complex carbohydrates are important to maintain a healthy brain. A diet rich in processed foods, salt and refined sugars can increase inflammation and free radicals in our body that can have negative impacts on brain health.

Cognitive stimulation by learning new skills or knowledge maintain good brain health with the formation of new circuits between brain cells. Challenging the brain increases its cognitive reserve by creating an adequate backup system. With more reserves, the brain can become more resistant to changes that are associated with neurodegenerative diseases. Education and learning enhance the cognitive reserve which makes the brain less susceptible to the effects of age and brain-related changes.

Depression and anxiety can be detrimental to brain health with their effects on mood and emotion. These conditions lead to slow thinking, memory and concentration difficulties. Social connectivity helps get rid of depression and anxiety. Socialising helps the brain to expand its cognitive reserve. Engaging in conversation trains the brain to increase attention and concentration and helps social judgement. It is important to stay connected with friends and family to maintain healthy brain function.

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