

# WHO IS A SUPERAGER AND HOW TO BECOME ONE

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No two persons age identically. They age differently in terms of physical and cognitive functioning and even in outward looks and appearances.



Figure 1: Both are 51 years old.

## WHO IS A SUPERAGER?

Superageing is the dream for anyone because superagers are the people in their "70s, 80s and beyond" whose ability, whether it be their aerobic fitness, or their memory, or their way of thinking is of the standard of someone "at least 20 years younger". Hence there is considerable differential between the biological and chronological age for superagers.



Figure 2: 105 & 101 years old; married for 86 years.



Figure 3: 113 years old



Figure 4: Increasing the aerobic capacity

Maximal oxygen consumption or VO<sub>2</sub> max is the amount of oxygen you can take in and distribute to your tissues in a minute. On average, people lose 10% of their aerobic capacity every decade after age 30. Some studies have indicated that people in their 80s who exercised at high intensity for 20 to 45 minutes a day have an aerobic capacity of people 30 years younger. As VO<sub>2</sub> max increases, the risks of cardiovascular disease, dementia, and death fall. Most super agers maintain a healthy weight throughout life. Staying socially engaged is also important, and work is a high priority, with many super agers working until very late in life. They are not deterred easily and have a sense of optimism.

Superagers not only live well physically, but also continue to demonstrate high levels of cognitive functioning. Superagers have less evidence of brain atrophy and tau burden in their brain, have thicker parts of the brain related to memory, and lower prevalence of amyloid deposits and other pathological changes associated with Alzheimer's disease.

On average, middle-aged individuals lose approximately 2.24% of brain volume every year. In contrast, superagers lose around 1.06% annually, making them less prone to developing dementia. In looking at the brains of superagers, researchers found that the volume of the anterior cingulate, a brain area important for emotion and attention, declines more slowly in cognitive superagers than age-matched controls. Further, post-mortem analysis of superager brains showed greater number of Von Economo neurones in the anterior cingulate compared to controls. These neurons are hypothesized to be important for higher order social cognition and behaviors. Superagers build their brain power through exercise and proper diet.

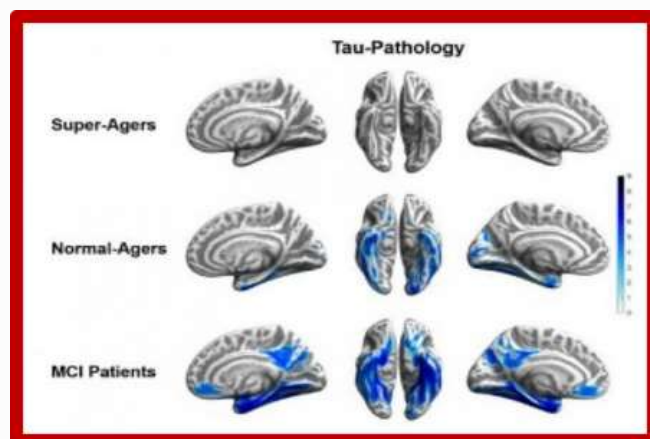


Figure 5: Tau pathology with ageing



Figure 6: Building the brain power

Now, a study suggests that having resilient memory performance during aging could be inherited, and that a particular gene might be associated with superagers. The study suggests that therapies targeting the MAP2K3 gene could reduce age-related memory decline and perhaps the threat of memory loss posed by Alzheimer's disease. MAP2K3 inhibitors may therefore represent a novel therapeutic strategy for enhanced cognition and resistance to Alzheimer's disease. Further research in this direction will provide more light.

**Superagers not only live well physically, but also continue to demonstrate high levels of cognitive functioning.**

# HOW TO BECOME A SUPERAGER:

## SUPERAGERS' HABITS MAY INCLUDE:

1. Exercising regularly for 30 minutes a day, 5 days a week, which helps maintain body weight and reduces risk of falls and chronic diseases, such as heart disease, diabetes, dementia and hypertension.

2. Eating right with a Mediterranean diet comprised of olive oil, vegetables, fruits, fish and whole grains and associated with significantly less chronic diseases and brain decay.

3. Avoiding smoking and excessive drinking.

4. Exercising the brain by learning new languages, new musical instrument, playing crossword, acrostics or mathematical games, unpacking and assembling newly purchased gadgets, and exploring the internet by online shopping, paying utility bills, calculating income tax etc. even at the cost of some temporary frustration and disappointment during the learning phase.

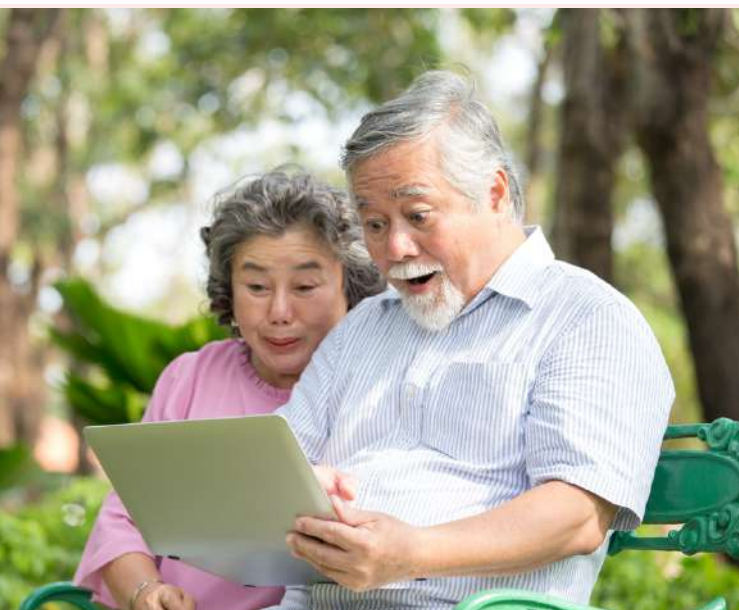
5. Keeping the family on a high pedestal, maintaining friendships and remaining socially active by attending functions or volunteering to work for clubs and associations.

6. Having a purpose in life such as helping others and continuing to ask, "why am I here?"

7. Practicing spirituality through meditation, yoga, pranayama, praying and thereby strengthening the spiritual traits.



## SUPERAGERS' ATTITUDES MAY INCLUDE:



1. Noticing goodness of others and only holding on to their goodness. Zest-continuing to be amazed like a child.

2. Keeping the attitude that age is an issue of mind over matter-if you do not mind, it does not matter.

3. Believing and practicing the performance of a work with passion, prudence and persistence.

4. Maintaining hope for the future by planning ahead

5. Interpreting the world with the amazement of a child

6. Appreciating all the gifts the world has to offer 