

# Memory

Memory allows us to learn, acquire, store and retrieve information.

## The Biology of Memory

With each new experience or repetition of a previous one, the brain rewires itself. Our brain has the amazing capacity to change and grow new neural connections. This is known as neuroplasticity. That means some areas of the brain can grow with repeated use.

A healthier brain means better memory. Nutrition, sleep and exercise all contribute to brain health and improved memory for all ages.

### I. Eat more healthy food:

- Berries are rich in flavonoids.
- Olive oil - omega 3
- Fish - fatty acids
- Nuts and seeds - DHA
- Eggs - micronutrient choline
- Green leafy vegetables - phytonutrients

Eat less:

- Added sugar
- Refined carbs

Drink plenty of water. The brain cells appear to be more sensitive to water loss than other body cells. (Dr. Lawrence Armstrong, Ph.D. University of Connecticut)

### II. Exercise for Brain Power

Exercise stimulates the release of serotonin, dopamine, noradrenaline and endorphins and makes you feel calmer and happier. (Dr. Wendy Suzuki, neuroscience and psychology at NYU.) Dr. Suzuki's research also shows that exercise has a profound effect on our thinking skills.

According to researchers at the University of Illinois at Champaign - Urbana, Exercise also increases volume in the hippocampus that regulates memory by 2% each year.

So, before we start each day, take our children / students outside and exercise with them. (A quick crossing the midline activity for 10 min. as suggested in the earlier section.)



### III. Sleep

Matthew Walker, neuroscientist and psychologist, UC Berkeley, suggested that the slow-wave sleep REM (dream sleep) has distinct impacts on memory formation and processing. ("We sleep, unlocking the Power of sleep and Dreams", 2017)

While we sleep, the brain weeds out the unnecessary information to make room for new information.

Recent theories of sleep show that the cells of the sleepy brain are very active. They shrink to allow fluid to rinse away toxins, and increase levels of hormones, enzymes and proteins.

Let's "sleep on" this and help our children to have plenty of restful sleep.

For more in depth information, read, "The Power of Memory, the Story of Our Lives." Build A Sharper Mind. Erase Bad Memories. What Animals Recall. - special HEALTH edition, 2022.