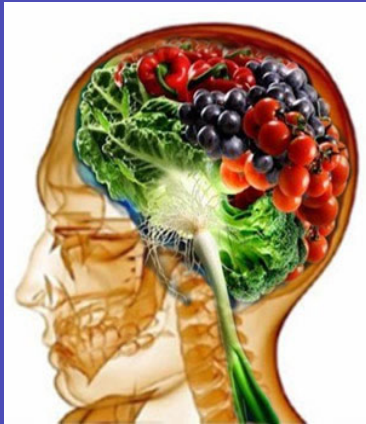


Healthy Life Styles

Brain Matters!



1. Brain facts
2. Changes in the brain
3. Brain is made up of water
4. Brain is mostly fat
5. Eat Smartly
6. Brainy foods in the Holy Qur'an
7. Spice up your brains
8. Environmental toxins hurt your brains
9. Sugar makes your less smart
10. Brain fitness



Shanaz Butt

Brain Facts

- ❖ Brain is the central controller of thoughts, movements, memories & decisions.
- ❖ Brain is ~the same size at birth as in adulthood, and contains most of the cells required through out life span.
- ❖ Adult brain weighs ~3 pounds (1.5 kg). It is protected by the skull (cranium), and made up of 22 bones fused together. 75% of brain mass is water.
- ❖ Makes up ~2% of the body's weight; yet uses ~20% of body's energy.
 - ❖ Uses 20% of the blood circulating and 20% of total oxygen in body.
- ❖ Awake brain produces enough electricity (25 watts) to power a light bulb.
- ❖ Lack of O₂ in the brain for 5-10 min can damage brain permanently.
- ❖ There are no pain receptors in your brain, so your brain does not feel pain.
- ❖ There are ~100,000 miles of blood vessels in your brain.
- ❖ 2/3 of brain is made up of specialized fats.
- ❖ One of the most common fatty acids is oleic acid, which is also the most abundant fatty acid in human milk and in our diet.

<http://www.sciencekids.co.nz/sciencefacts/humanbody/brain.html>; <https://faculty.washington.edu/chudler/ffacts.html>

<http://www.sfn.org/public-outreach/brainfacts-dot-org>; <http://www.epyk.com/37/10-interesting-facts-about-the-human-brain/3/>

Brain Anatomy

Frontal Cortex (Thinking brain)

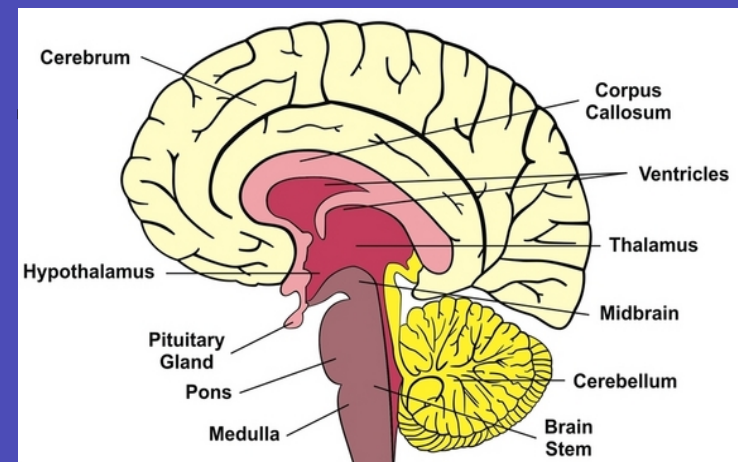
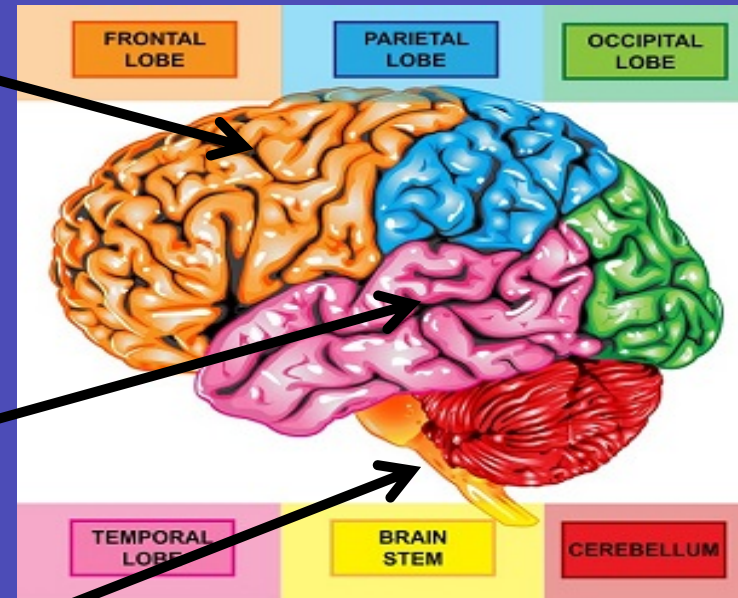
- Larger portion of the brain
- Located behind the forehead
- Executive functions;
- Controls judgement and impulse
- Damage → lapses in judgement, memory loss, disorganized thinking, short attention span, impaired learning

Limbic Regions (Moody brain)

- Emotions
- Addiction

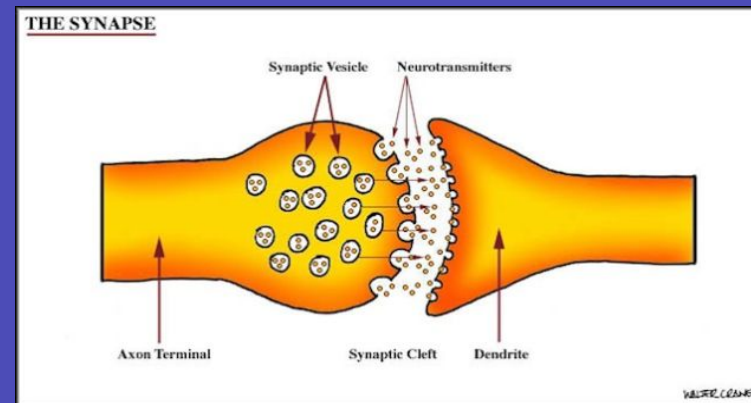
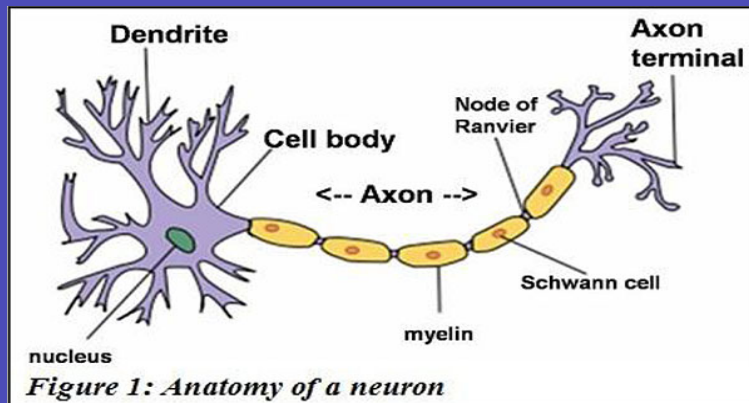
Brain Stem (Reptile brain)

- Repetitive, automatic, unconscious control
- Sympathetic & Parasympathetic
- Fight or flight responses



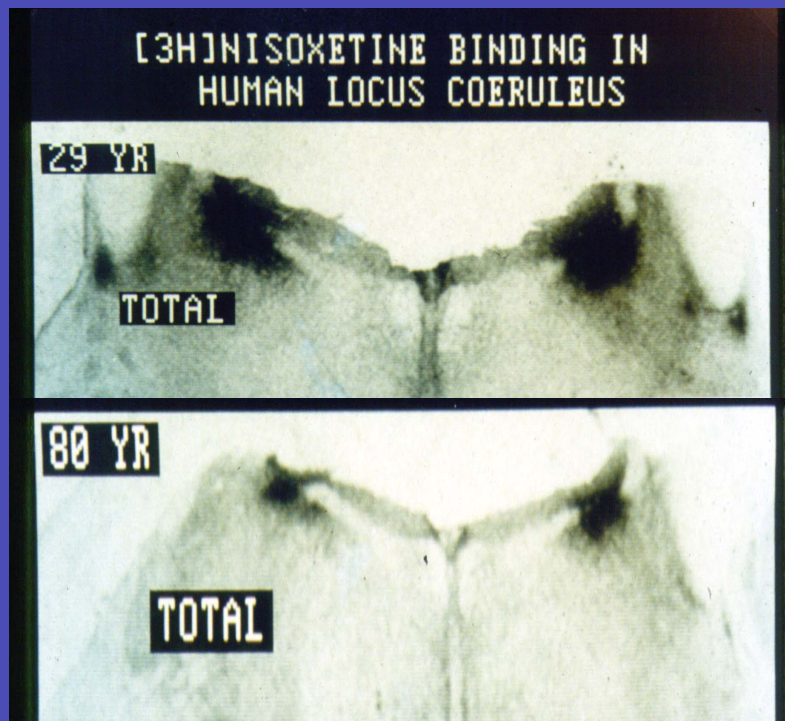
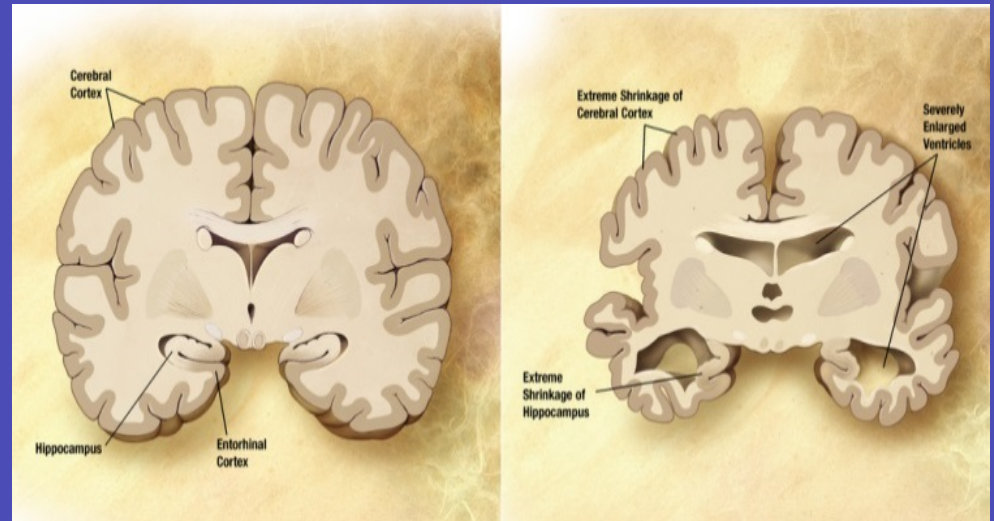
Brain Building Blocks

- The brain contains ~100 billion neurons (nerve cells) that send and receive information around the body. Amounts to ~ 15 X the total human population on earth.
- Nerves are made up cell body, axons and dendrites
- Axons carry information away and dendrites carry towards



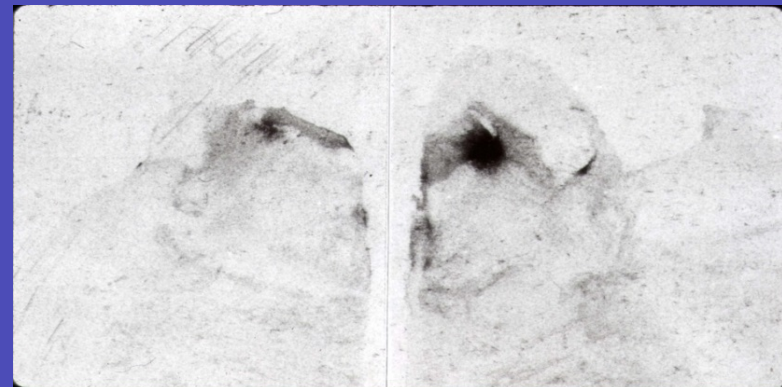
Age Related Changes in the Brain

Normal loss of cells begin in 4-5th decade of life (~5% neurons lost per decade)



Shanaz Tejani et al., 1992

Alzheimer's Disease



Female with AD

Control

Shanaz Tejani et al., 1993

As we Get Older...

- ❖ Female brain more prone to anxiety attacks and depression → menopause often a factor.
- ❖ Hormone levels
 - Low Estrogen resulting from menopause → linked to memory loss and “brain fog” → need natural sources of E
 - Low Thyroid hormone → fatigue, weight gain, lack of temperature control
 - require a diet rich in Vitamin B, Vitamin A and Iodine
- ❖ Circulation
 - High blood pressure, Cholesterol, Triglycerides → sluggish circulation → reduced blood flow and O₂ to brain → need Exercise, Diet
- ❖ Weight
 - Body Mass Index (BMI) → over 25 = overweight.
 - $BMI = (\text{Weight in Pounds} / (\text{Height in inches} \times \text{Height in inches})) \times 703$
 - Obese people have 8 % less brain tissue
 - According to Prophet Mohammed (saw) we are advised to leave one third of our stomach empty after finishing the meal.

Then which of the favors of your Lord will you twain deny? [Quran 55:14]



Foods to Eat For a Healthy Brain:



Carrots

Pumpkin Seeds

Figs



Almonds



Edamame



Apples



Avocados



Cacao Beans



Bananas



Berries



Hemp Seeds



Broccoli



Millet



Squash



Flax Seed



Black Beans



Spinach



Mushrooms



Sweet Potatoes



Olives



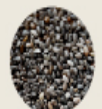
Walnuts



Coffee Beans



Oranges



Chia Seeds



Coconut



Collard



Quinoa



Wild Rice



Romaine



Chickpeas



Chard



Teff



Lentils

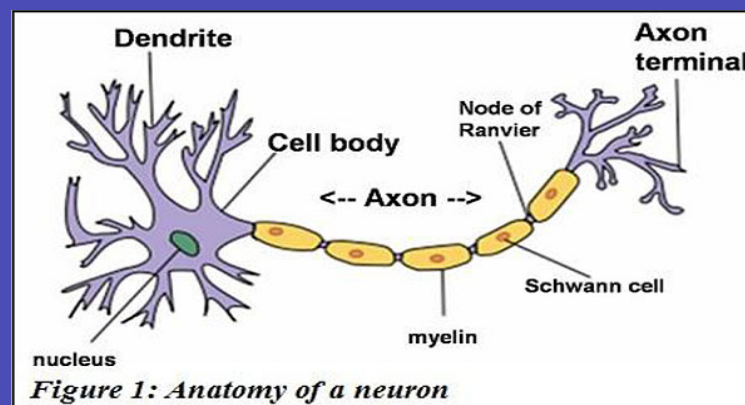
Your Brain is made up of Water



- ❖ Brain is 70 % water. So water your brain!
- ❖ Dehydration has severe effects on the body, especially the brain
 - ❖ 8 Glasses (64 oz) of water per day
- ❖ Milk
- ❖ Beet juice
- ❖ Berries
- ❖ Carrot juice
- ❖ Pomegranate
- ❖ Coconut water-Causes rapid hydration. Each serving contains more K than a banana, plus other essential minerals and vitamins such as iron and manganese. Also contains Na, Mg, Ca, and P
- ❖ Tea – energy booster - Catechins keep mind sharp

Your Brain is made up of Fats

- ❖ The brain is the fattest organ in body, made up of at least 60 % fat.
- ❖ The common fat is oleic acid, an unsaturated fat, found in nuts, olive oil, sunflower seeds and avocados.
- ❖ Myelin, the protective sheath that covers neurons, is composed of 30% protein and 70% fat (oleic acid).



- ❖ Brain cells need 2 kinds of “essential” fatty acids (**Omega-3 and Omega-6**)
We get these fatty acids from the foods we eat.

Omega-3 and Omega-6 Fatty Acids

- ❖ Foods rich in **omega-3** include flax seeds, chia seeds, walnuts, sea vegetables, green leafy vegetables, and cold water fish like salmon, sardines, mackerel, and trout.
 - ❖ Omega-3 helps brain function by coating neurons (with good fat) that become stiff with age and diet (high content of cholesterol and saturated fat in the body).
 - ❖ Omega-3s provide more oxygen to the brain
 - ❖ Omega -3 fatty acids are antidepressants, anti-inflammatory, antioxidants, and anticoagulant.
- ❖ Foods rich in **omega-6** include cold-pressed sunflower, safflower, corn, and sesame oils.
 - ❖ Support brain function, bone health, reproductive health, hair growth and regulation of metabolism.
 - ❖ Omega-6 is pro-inflammatory

Eat Smart

- ❖ **Nuts & Seeds** - Peanuts, hazelnuts, cashews, almonds, walnuts, pecans, pumpkin seeds, sunflower seeds, and any other type of nut or seed are good for your brain.
 - ❖ Contain Omega-3 and Omega-6 fatty acids, as well as folate, vitamin E, and vitamin B6, which allow you to think more clearly.
 - ❖ Some seeds and nuts have thiamine, selenium and magnesium; good for memory, cognitive function and brain nourishment.
 - ❖ Seeds contain zinc → good for memory and immune system
- ❖ **Fish** - Fortify the synapses and memory
 - ❖ Contain Omega-3. Best fish for brain health are salmon, tuna, and herring.
- ❖ **Eggs**
 - ❖ The brain shrinks with age (called brain atrophy).
 - ❖ Eggs are full of vitamin B12, lecithin and essential fatty acids.
 - ❖ The yolk, though high in cholesterol, is also high in choline, which is an important building block of brain cells and can improve memory.
 - ❖ Vitamin B12 helps to fight against brain shrinkage, which is often seen in Alzheimer's disease.
 - ❖ Eating too many eggs can be bad for your health, eating 1-2 egg products a day can be good for overall brain health.

Eat Smart

- ❖ **Green leafy Vegetables** such as Kale, Spinach, Cabbage, Broccoli are full of vitamin B6, B12, K and folate, needed by the brain to break down homocysteine levels, which can lead to forgetfulness and Alzheimer's disease.
 - ❖ Helps make red blood cells, provides nutrition to neurons
- ❖ **Eggs**
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 - ❖ Eating too many eggs can be bad for your health, eating 1-2 egg products a day can be good for overall brain health.

Eat Smart

- ❖ **Berries** - improve or delay short term memory loss
 - ❖ Blackberries, blueberries, raspberries, etc., are full of antioxidants.
 - ❖ Berries are referred to as “super-fruits” because they contain fisetin and flavonoid, good for improving your memory and allowing you to recall past events.
- ❖ **Whole grains** & whole grain products
 - ❖ Whole wheat bran, and wheat germ have high contents of folate, as do brown rice, oatmeal, whole-grain breads, barley, and others.
 - ❖ Whole grain foods contain a lot of vitamin B6. Work to increase blood flow to the brain which means a higher quality and quantity of brain function.
- ❖ **Avocados** - monounsaturated fats improve vascular health and blood flow.
 - ❖ Avocados are smooth and creamy because of their fat content. They are rich in a fatty acid called oleic acid, which helps to build the coating of insulation, known as myelin (found in white matter of the brain.) Myelin helps information travel at speeds of up to 200 miles per hour.
 - ❖ Neurons without myelin (gray matter) process information at slower speeds.
- ❖ **Tomatoes** - lycopene, a powerful antioxidant. Could protect against free radical damage to brain cells

Eat Smart

- ❖ **Dark Chocolate** contains antioxidants and natural stimulants (including caffeine), which improve focus and concentration, and stimulate production of endorphins, which improves mood. Also increases levels of serotonin, acting as an antidepressant.
- ❖ Dark chocolate is rich in fiber and a rich source of magnesium, which can help balance brain chemistry.
- ❖ **Apples and Plums** contain a special antioxidant called quercetin, which protects your brain cells from damage. Degradation can lead to a decline in cognition which includes oxidative injury. Thus, apples delay the onset of diseases like Parkinson's and Alzheimer's.
- ❖ **Sweet potatoes** are rich in carotenoids, giving them the orange color.
 - ❖ Carotenoids are important for the brain because they act as antioxidants, protecting cells from damage.
 - ❖ Carotenoids form vitamin A, which is important in helping to sprout new neurons and to help neurons find each other to form new connections.
 - ❖ Despite sweet taste, sweet potatoes are less sugary than white potatoes.

Eat Smart

- ❖ **Green leafy Vegetables** such as Kale, Spinach, Cabbage, Broccoli are full of vitamin B6, B12, K and folate, needed by the brain to break down homocysteine levels, which can lead to forgetfulness and Alzheimer's disease.
 - ❖ Helps make red blood cells, provides nutrition to neurons
- ❖ **Beans** are packed with fiber, vitamins, minerals and protein, and are inexpensive.
- ❖ The brain uses roughly 20% of your carbohydrate intake. It is dependent on blood sugar for fuel and since it can't store the sugar, it relies on a steady stream of carbs — which beans can satisfy.
- ❖ Garbanzo beans are one of the best food sources of magnesium (aside from kelp and green leafy vegetables). Magnesium citrate benefits brain cell receptors to speed the transmission of messages, while also relaxing blood vessels, which allows more blood flow to the brain.
- ❖ **Celery** is a rich source of luteolin, that may calm inflammation in brain. Luteolin also linked with lower rates of age-related memory loss in mice. Peppers and carrots are also good sources of luteolin.

Honey improves Mental Health

- ❖ One tablespoon of honey = 64 calories; yet has a healthy glycemic load of 10 for 1 Tbsp., little less than a banana. It does not cause a sugar spike and elevated insulin release that white processed sugar does.
- ❖ Composition is ~80% carbohydrates, 18% water, and 2% vitamins, minerals, and amino acids.
- ❖ Honey works as an anxiolytic, anti-nociceptive (decreases pain stimuli), anticonvulsant and antidepressant.
- ❖ Contains natural antioxidants, enzymes and minerals including iron, zinc, calcium, potassium, phosphorous, magnesium and selenium.
- ❖ Contains vitamin B6, thiamin, riboflavin, pantothenic acid and niacin.
- ❖ Research suggests that the polyphenol constituents of honey can quench biological reactive oxygen species and counter oxidative stress while restoring the cellular antioxidant defense system.

<http://www.hindawi.com/journals/ecam/2014/958721/>

<http://www.medicaldaily.com/liquid-gold-7-health-benefits-honey-could-heal-your-whole-body-325932>

Grapes & Olives for Brain Health

- ❖ The brain is vulnerable to oxidative damage because of its high use of oxygen relative to its size with few antioxidant defense systems available.
- ❖ Polyphenols in **Grapes** neutralize free radicals and combat oxidative stress.
- ❖ Recent studies suggest that grape juice may slow the progression of age-related memory decline and motor function in older adults.

<http://www.grapescience.com/concord-grapes-and-health/cognitive-function.aspx>

- ❖ **Olive** oil is a good source of vitamins E and vitamin K.
- ❖ Vitamin E prevents mental decline as we age. Vitamin E, especially in the presence of vitamin C, works to maintain a good memory, slows memory loss, and reduces risk of Alzheimer's disease and dementia.
- ❖ Vitamin K is found in green leafy vegetables. And in olive oil. Vitamin K helps keep your brain sharp as you age and boosts your brain processing speed.
- ❖ Olive oil also contains over 30 phenolic compounds that are potent antioxidants and free radical scavengers.

<http://bebrainfit.com/olive-oil-brain-food/>

Pomegranate

- ❖ Pomegranates offer powerful antioxidant benefits, which protect your brain from damage caused by free radicals. 3X as many antioxidants as red wine & green tea
- ❖ Eat actual fruit rather than juice so that you get all the fiber
- ❖ Over a four-week study period, the subjects participated in memory tests, MRI scans, and blood draws. Those participants in the pomegranate juice group saw “significant improvement” in verbal memory tests and plasma antioxidant levels. They had increased brain activity during memory and verbal testing, suggesting the juice helped encourage increased blood flow to “critical task-related” regions of the brain.
- ❖ One study published in the *American Journal of Clinical Nutrition* found that patients with atherosclerosis, or hardening of the arteries, saw major benefits after supplementing with pomegranate juice. One year of drinking the juice, clogging of their carotid arteries reduced up to 30%. The control group, who didn’t take the juice, saw an increase in blockage by up to 9%.

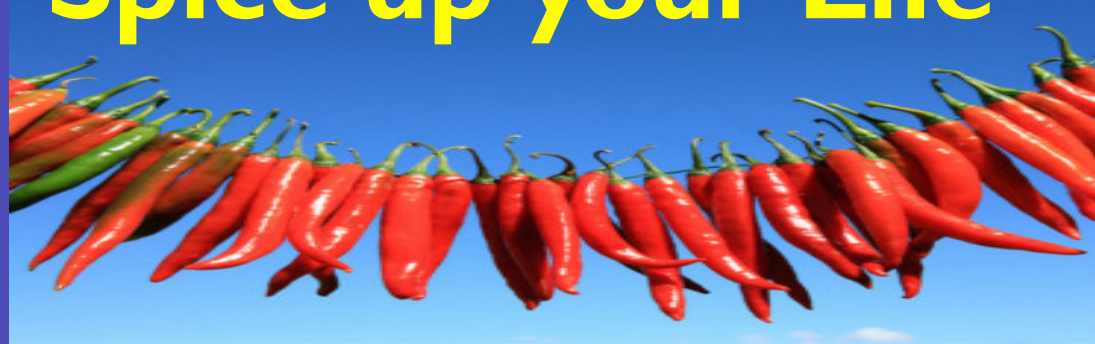
<http://naturalsociety.com/pomegranate-juice-significantly-improve-memory/#ixzz3eO6nNocr>
<http://www.livestrong.com/article/261199-the-benefits-of-pomegranate-juice-for-the-brain/>

Figs

- ❖ Figs called “brain food,” because they contain vitamins and minerals important to brain functioning.
- ❖ Figs nourish brain by providing a source of potassium. Every nerve in your brain needs potassium to function. The mineral helps your cells produce action potentials - small electrical signals your nerves use to communicate.
- ❖ Eat figs as a source of manganese, a mineral important for maintaining a healthy brain. Manganese activates enzymes, including those that protect your brain from glutamate, a compound that proves toxic if it accumulates in your brain.
- ❖ Figs also have high vitamin B-6 content. Vitamin B-6 helps produce neurotransmitters → a family of chemicals that your brain cells release to communicate with neighboring cells. Some neurotransmitters such as dopamine and serotonin, help regulate your mood; while others, such as acetylcholine, help with learning.

<http://healthyeating.sfgate.com/figs-good-brain-food-5499.html>

Spice up your Life



Curcumin is an effective therapeutic strategy to reverse age-related cerebrovascular dysfunction.



Turmeric regenerates Brain cells

Turmeric is an Antioxidant with Anti-inflammatory properties

- ❖ High consumption leads to decreased levels of C-reactive protein which causes inflammation to brain and other tissues
- ❖ Curcumin, a main component of Turmeric, assists the brain to optimize its abilities, aiding in the regeneration of brain stem cells.

Ginger protects the Brain

Ginger is used for flatulence, constipation, bloating, and other digestive complaints

- ❖ Protective effects on the brain
- ❖ Reduces migraine related discomfort
- ❖ Powerful blood sugar balancing properties
- ❖ Effectiveness against hypertension
- ❖ Relieves muscle discomfort and osteoarthritis
- ❖ 6-Gingerol, has been isolated, tested and determined as an active factor in regulating blood pressure and supporting cardiovascular health.

Garlic protects from Brain tumors

- ❖ Garlic has anti-inflammatory properties; can protect against brain cancers.
- ❖ Diallyl tri-sulfide, or DATS, found in garlic may play an important role in reducing tumor growth in patients with glioblastoma, the most deadly form of brain tumor.
- ❖ Garlic slows down the process of degenerative change seen in Alzheimer's disease where patients suffer cognitive problems, such as memory loss, and experience difficulty speaking, making decisions, and recognizing people.
- ❖ Garlic has a protective antioxidant effect on the brain.

http://www.needs.com/product/HWC08-GAR-01/_Brain_Health

<http://www.livestrong.com/article/248672-benefits-of-garlic-for-the-brain/>

Cinnamon is a Brain Tonic

- ❖ Cinnamon boosts the activity of the brain and hence acts as a good brain tonic. It helps in removing nervous tension and memory loss.
- ❖ Smelling cinnamon may boost cognitive function, memory, performance of certain tasks and increases one's alertness and concentration.
- ❖ Cinnamon is a good source of the powerful antioxidant manganese. Two teaspoons of cinnamon provides about half the RDA of manganese, a powerful antioxidant that is crucial for brain and body health.
- ❖ Cinnamon has also been shown to reduce blood sugar levels in people with type II diabetes and reduce cholesterol levels by up to 25%. Thus, cinnamon is good for your brain and body.

<http://blog.brainhq.com/2014/07/28/5-proven-brain-benefits-of-cinnamon/>

<http://www.naturalfoodbenefits.com/display.asp?CAT=6&ID=113>

Capsicum, capsaicin, and cayenne pepper

- ❖ Capsicum is a catalyst herb. Its stimulating properties speeds the absorption and effectiveness of herbs taken in combination with it.
- ❖ Capsicum contains carotenes. Carotenes are antioxidants known for their effects in helping prevent cancer and cardiovascular disorders and for helping to protect the body from carcinogenic and toxic chemicals.
- ❖ It also contains vitamin A, beta-carotene and vitamin B1, B2, B3, B5, B6, B9 (folic acid), cobalt and zinc.
- ❖ Rich supply of vitamin C and alpha-tocopherol (vitamin E).
- ❖ Beneficial for chronic fatigue and mild depression.
- ❖ Lowers serum cholesterol and serum triglycerides.
- ❖ Great for energy.
- ❖ Cayenne pepper → improves vasodilation and hence blood flow to brain.

<http://www.rd.com/health/healthy-eating/4-best-herbs-for-the-brain/>

<http://www.healingcancernaturally.com/cayenne-pepper-healthbenefits.html>

<http://naturalsociety.com/6-herbs-boost-brain-power-genius/>

<http://www.westernbotanicals.com/article/5-Herbs-for-the-Brain>

Sage

- ❖ The herb also has anti-inflammatory and powerful memory enhancing qualities. In trials, even small amounts of sage have been shown to significantly boost memory recall.
- ❖ One of sage's anti-oxidants, carnosic acid, can cross the blood brain barrier to halt free radical damage in the brain. The same anti-oxidant increases production of glutathione, an important anti-aging anti-oxidant - which improves circulation to the brain by dilating the cerebral middle arteries.
- ❖ Glutathione is actually used to treat all sorts of brain diseases, from autism to Alzheimer's. Having good blood flow to the brain is important, and low blood flow to the brain can exacerbate, and even cause, other problems of the brain.

http://www.naturalnews.com/032632_sage_brain_health.html

<http://www.rd.com/health/healthy-eating/4-best-herbs-for-the-brain/>

<http://naturalsociety.com/6-herbs-boost-brain-power-genius/>

<http://www.westernbotanicals.com/article/5-Herbs-for-the-Brain>

Environmental Toxins



- ❖ Edible Toxins - exposure to Hg in fish, water, dental fillings
 - leads to oxidative stress, inflammation, damage to brain functions
 - Limit canned foods, especially canned fish
 - Use cold water fish such as salmon, sardines
- ❖ High Omega-6 in diet. These are the pro-inflammatory essential fatty acids found in cooking oils, fatty meats and processed foods.
 - Make intake of omega-6 less and omega-3 more
- ❖ Artificial colors and flavors are harmful to brain cells. of brain cells
 - Artificially flavored butter, pop corn, drinks, desserts, etc.
- ❖ Refined sugars and bleached flour

Iron Out your Brain

- ❖ Metals such as Iron, Zinc, Copper, Aluminium: too much is not good in super foods or vitamin supplements
 - ❖ Can produce free radicals that impair brain function and memory
 - ❖ Post menopausal women need less iron (~ 8 mg daily). Double if you are younger. Cereals and other foods are fortified.
 - ❖ Copper – high Cu plus saturated fats → loss of mental function (need 0.9 mg).
 - ❖ Zinc – for immunity, skin health, sexual function; need 8 mg.
 - ❖ Al – high Al in water—risk for Alz. Avoid foods that contain Al → baking powder, baked goods, antacids, pots, foods in Al cans, tap water, antiperspirants
- ❖ Natural sources such as nuts, grains and beans contain phytates which help reduce absorption of Cu by the body.

Sugar decreases your smarts!



Too Much Blood Sugar = Too Little Brain Sugar

- ❖ Glucose is the only fuel used by brain cells. Because neurons cannot store glucose, they depend on the bloodstream to deliver a constant supply of this precious fuel.
- ❖ Complex carbohydrates are like time-release capsules of sugar. Simple carbohydrates are more like an injection of sugar.
- ❖ A sugary snack or soft drink that quickly raises your blood sugar level fast and for a short time.
- ❖ When you eat something with a high sugar content your pancreas starts to secrete insulin. Insulin triggers cells throughout your body to pull the excess glucose out of your bloodstream and store it for later use.
- ❖ Thus, glucose available to brain drops. Neurons, unable to store glucose, experience an energy crisis. Hours later, you feel weak, confused, or nervous.
- ❖ Foods with a low glycemic index number gradually release glucose into your bloodstream. This gradual release helps minimize blood sugar swings and optimizes brainpower and mental focus.

Sugar damages the Brain

- ❖ Besides obesity, sugar damages brain cells
- ❖ Fructose impairs memory
- ❖ When the body processes sugar, glucose (blood sugar) levels increase, thereby activating the hypothalamus in the brain. Overall, the brain treats sugar as if it were an invasion like a virus. This sort of response places wear-and-tear on the brain, thereby decreasing long-term cognitive abilities.
- ❖ Refined sugar may even affect short-term memory.
- ❖ A 2012 study, involving 1,230 seniors between 70 - 89 years, found a strong link between food choices and cognitive impairment. The study concluded that a high-sugar diet increased the risk of cognitive impairment 1.5 x more than diets low in sugar.
- ❖ The average American consumes over 150 pounds of refined sugar, plus an additional 62 pounds of high fructose corn syrup (HFCS) every year.
- <http://draxe.com/the-many-health-benefits-of-raw-honey/>

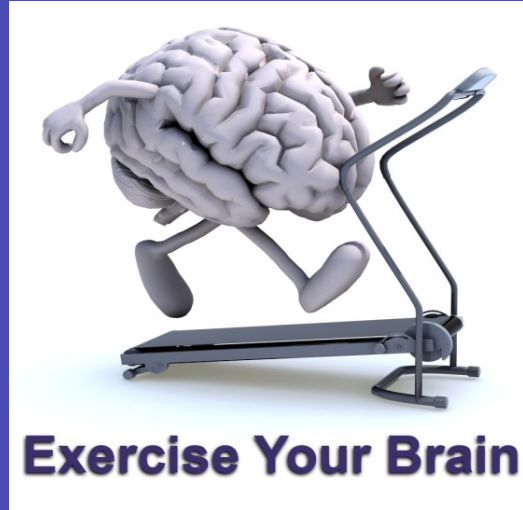
Watch out for...

- ❖ Try to consume sugar in combination with omega 3 – example flaxseeds, fish, nuts – walnuts at mealtimes
- ❖ Eliminate soda
- ❖ Drink only 100% juice (in limited quantities) – better to eat fresh fruits
- ❖ Choose unsweetened tea instead of sweet tea
- ❖ Refrain from “low-fat” packaged foods (often contain more sugar & sodium)
- ❖ Looking at nutrition labels can also provide clues into sugar content.

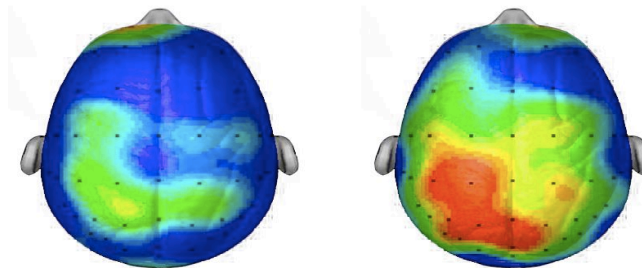
Examples of hidden sources of sugar to look for:

- Corn sweetener/syrup
- Dextrose
- Fructose
- Glucose
- Maltose
- Molasses
- Sucrose

Brain Fitness



Composite of 20 student brains taking the same test



After sitting quietly

After 20 minute walk

Research/Scan compliments of Dr. Chuck Hillman University of Illinois

Use it or Lose it

- ❖ Organize your brain
 - ❖ Decrease multitasking
 - ❖ Focus → decrease distractions from life
 - ❖ **Calm your brain**
 - ❖ Center your breathing. Inhale 6 sec, hold for 2 sec, exhale for 7 sec
 - ❖ Regular sleep
 - ❖ Sleep problems → 18 M have sleep apnea, overweight is a risk factor
 - ❖ Poor sleep → poor blood flow to brain, lack of concentration, mood, cognitive decline over time, fatigue, headaches
- ❖ Learn new things everyday
 - ❖ Learn new languages or new skills
 - ❖ Regularly do your mental push ups → quizzes, games, etc. that challenge your brain
 - ❖ Reading and writing strengthens brain connections
- ❖ Physical Activity strengthens your brain; areas for memory and learning.
- ❖ Caloric restriction and stay away from unhealthy foods



Purpose in Life- Aging Gracefully

- ❖ I feel good when I think of what I have done in the past and what I plan to do in the future
- ❖ Make a list of goals that make your life more meaningful
- ❖ Volunteer to bring meaning to the lives of others
- ❖ Eat a diet rich in colorful fruits and vegs
- ❖ Our healthy body is a gift from God. We are the trustees. We should take good care of it.
 - ❖ Lose weight
 - ❖ Control diseases
 - ❖ Exercise body and brain
- ❖ Food is the brain's primary link.
- ❖ Your diet affects brain chemistry which influences mood, behavior, thought processes and health.
- ❖ What you eat and how much you eat is within your control.

Additional References

- ❖ <http://www.webmd.com/diet/features/eat-smart-healthier-brain?page=2>
- ❖ http://www.miraclesofthequran.com/food_01.html
- ❖ <http://www.scientificamerican.com/article/mediterranean-diet-with-olive-oil-nuts-linked-to-healthier-brain/>
- ❖ <http://www.healthybrainforlife.com/articles/food-allergies-and-intolerance>
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