MEMORY

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The following information has been extracted from our clinical wholistic health library for your convenience.

REASONS FOR MEMORY LOSS:

1. **Many people have memory loss due to an insufficient supply of necessary nutrients to the brain. The blood goes to the brain and the brain is surrounded by a protective envelope known as the blood-brain barrier which allows only certain substances to pass from the bloodstream into the brain. If the blood is thickened with cholesterol and triglycerides, the amount of nutrient-rich blood that can pass through the blood brain barrier decreases. Over time this can result in the brain becoming malnourished.**

2. **The function of the brain depends upon substances called neurotransmitters which are brain chemicals that act like electrical switches in the brain and ultimately are responsible for all functions of the body. If the brain doesn't have an adequate supply of neurotransmitters or nutrients from which to make them, it begins to develop power failure or short circuits. If your mind goes blank when you are trying to recall a specific fact or piece of information or begins to plus into an irrelevant memory instead, it is likely that a short circuit has occurred.**

3. **Exposure to free radicals can wreak enormous damage to the memory.**

4. **Nutritional deficiencies, especially deficiencies of the B vitamins and amino acids, can account for memory loss.**

5. **Many elderly people have difficulty sleeping. New research indicates insufficient sleep will affect the development of alzheimers or dementia so it is important to address this if it is a problem.**

6. **Alcohol and drug addicts suffer from a great deal of memory loss. Often alcoholics will have 'blackouts', huge memory gaps even when they are awake and conscious.**

7. **Allergies, candida, stress, thyroid disorders, and poor circulation to the brain can contribute to memory loss.**

8. **Low blood sugar (hypoglycemia) may also cause memory loss as the brain requires a certain level of glucose (sugar) in the blood and it must be kept within a pretty narrow range or you will have feedback letting you know it is in disorder. The feedback will be brain function and memory.**

Here is a list of all the various nootropic remedies that are found in memory complexes and what they are used for. There is no one product that has everything in it. Usually there is a combination of 4 – 6 remedies.

Choline - Phosphatidylcholine

The vitamin Choline supplement is often used to treat high cholesterol, improve memory and protect the liver.

Choline supplements are often taken as a form of 'smart drug' or nootropic, due to the role that the neurotransmitter acetylcholine (acetylcholine is a neurotransmitter in the nervous system) plays in various cognition systems within the brain. Choline is a chemical precursor or 'building block' needed to produce the neurotransmitter acetylcholine and research suggests that memory, intelligence and mood are mediated at least in part by acetylcholine metabolism in the brain. The compound's quaternary amine renders its lipid insoluble which might suggest it would be unable to cross the blood-brain barrier, however, despite choline's lipid insolubility, a choline transporter exists that allows transport across the blood-brain barrier. The efficacy of these supplements in enhancing cognitive abilities is an ongoing debate.

Supplementing with Choline:

Dietary supplement is lecithin, usually from soy or egg yolks. Phosphatidylcholine is also in pill or powder form.

Supplementary choline is available as choline chloride which comes as a liquid due to its hydrophilic properties. Choline chloride is sometimes referred to as a supplement because phosphatidylcholine can have gastrointestinal side effects.

Foods High in Choline:

100 g (3.5 oz) beef liver - 418 mg
1 large whole egg - 112 mg
3.5 oz patty ground beef (80% lean) - - 81mg
3/4 cup cooked cauliflower pieces - - 62mg
1/2 cup cooked Navy beans - - 48mg
100g (3.5oz) tofu - 28 mg
1/2 cup sliced almonds - 26 mg
2 Tbsp peanut butter – 20mg

Dosage of Choline Needed:

425 - 550 mg daily for adults.
Infants: to 6 months old: 125 mg 7-12 mo old: 150 mg
Children 1-3 yr old: 200 mg 4-8 yr old: 250 mg
Boys: 9-13 yr: 375 mg 14-18 yr: 550 mg
Girls: 9-13 yr: 375 mg 14-18 yr: 440 mg
Men: 550 mg
Women: 425 mg
Pregnant women: 450mg Lactating women: 550 mg

Contra-Indications

Maximum intake for adult is 3.5 grams (3500mg daily before side effects: low blood pressure, diarrhea, fishy body odor, tightness in throat or chest, chest pain, hives or rash, loss of appetite, breathing difficulty.

Choline is a precursor to trimethylamine which some are not able to break down due to a genetic disorder. Those with this disorder may suffer from a strong fishy or otherwise unpleasant body odor due to the body's release of odorous trimethylamine. Those with this disorder are advised to restrict intake of foods high in choline to help reduce odor.

Phosphatidylserine

Like Phosphatidylcholine, Phosphatidylserine has proven effective for memory problems. It works on the brain cell membranes and people are also using it for depression and moodiness. Stimulates brain to produce dopamine and acetylcholine. May therefore also help with ADD. For stress, aging, our wonderful north american diet that is lacking in nutrition. Sometimes even works where Phosphatidylcholine doesn't.

Alpha Lipoic Acid

This is a natural compound with antioxidant properties. It is a sulfur containing fatty acid found in every cell of the body. Many have used this for weight loss, diabetes, memory loss, skin health, reducing oxidative stress. It is present within mitochondria, the powerhouses of cells. It is needed for digestion, absorption and creation of energy. It helps enzymes turn nutrients into energy. The body can only produce this in small amounts so many take it as supplements. Oxidative stress occurs naturally with age so this may be of benefit. It is a universal antioxidant, eliminating free radicals in water and fatty tissue. It is most commonly used to treat nerve damage caused by diabetes. It may also help retard cataracts and neuro degenerative diseases including Parkinson's and Alzheimer's.

N acetyl Lysteine

Oxidative stress, neuroinflammation and neurogenesis are commonly implicated as cognitive modulators across a range of disorders. N-acetylcysteine (NAC) is a glutathione precursor with potent antioxidant, pro-neurogenesis and anti-inflammatory properties and a favourable safety profile. A systematic review of the literature specifically examining the effect of NAC administration on human cognition revealed twelve suitable articles for inclusion: four examining Alzheimer's disease; three examining healthy participants; two examining physical trauma; one examining bipolar disorder, one examining schizophrenia, and one examining ketamine-induced psychosis. Heterogeneity of studies, insufficiently powered studies, infrequency of cognition as a primary outcome, heterogeneous methodologies, formulations, co-administered treatments, administration regimes, and assessment confounded the drawing of firm conclusions. The available data suggested statistically significant cognitive improvements following NAC treatment

Vinpoecetine

This is a man-made chemical similar to a substance found in the periwinkle plant (Vinca minor). Vinpocetine might increase blood flow to the brain and protect brain cells (neurons) against injury. People use vinpocetine for memory, dementia, stroke, hearing loss, and many other conditions.

L Glutamine

L Glutamine is an amino acid said to improve memory, learning and focus. It also reduces anxiety. And inflammation of the colon/bowel. Many of our brain problems are a direct link to digestive disorders.

Huperzia Serrata

This is the plant also called Chinese club moss, that gives us the Huperzine A. It seems to help treat diseases that interfere with memory and thinking. Huperzine A has been shown to increase bioavailable levels of acetylcholine by inhibiting the enzyme that breaks it down, acetylcholinesterase. This fosters an ideal environment to form new neural connections and improve memory retention. Note that while huperzine A is extracted from huperzia serrata, they are not the same ingredient. Look for supplements that specifically contain huperzine A.

L Asparagine

This works for protein synthesis, playing a role in the formation and stability of protein structures. Necessary during periods of growth.

Silicum

Silicium is derived from silica. Foods high in silica are herb horsetail. It is said silica is an antidote to aluminum toxicity which they find in alzheimer's and cognitive decline. One should always reduce lead, aluminum, and mercury toxicity and this can also be done with homeopathy.

a-GPC Cl-alpha-glycerophorycholine – aka Alpha GPC

This naturally occurs in the body as a precursor to acetylcholine, one of the key

neurotransmitters in the brain's neural network. As a supplement, this compound rapidly crosses the blood-brain barrier and helps promote the synthesis of acetylcholine. In addition, alpha GPC encourages the development of cell membranes in the cerebral cortex, or "gray matter," for improved mental processing. Use to improve energy, long term memory, problem solving capabilities.

Cytidine 5-diphosphocholine aka Citicoline

A naturally occurring nonomucleotide, has beneficial effects on memory function. Helps enhance phosolipid levels, supporting memory and brain health over time.

White Mulberry Leaf(Morus Alba)

The extract is used to increase NGF levels, leading to increased brain cell growth. Enhances brain function and memory.

Vitamin B6 (pyridoxine) and Vitamin B12

Pub med says Vitamin deficiencies influence memory function. B6 is involved in the regulation of mental function and mood. Poor B6 is common among older people. Vitamin B12 is also essential to mental/brain function and difficult to absorb if the digestion is not functioning proeprly. B12 is derived from eating meat, but using B12 spray will bypass the digestion for those who have a problem. Foods high in B6 are chickpeas, tofu, beef liver, lentils, bananas, spinach, salmon, and peanuts, milk, avocado, ricotta cheese, tuna, eggs, chicken liver, beef

Taurine

An amino acid naturally produced by the body. Compelling evidence. Used for cognitive function, memory and focus. Alzheimer's.

Creatine

A compound naturally found in our bodies. Supplementation may benefit brain function, memory, reasoning, intelligence.

Grape seed Extract

Derived from grape seeds, has been used for many things. For memory is is used for anxiety, attention, mood, problem solving, long term memory and short term memory.

Omega 3

EPA and DHA are Omega 3 fatty acids, usually from fish oil. Addresses attention, mood, learning, long term memory, problem solving, short term memory. If you want to get this from food sources, try salmon.

Hericium Erinaceus

This has been used for thousands of years by Buddhist monks to increase focus during meditation, hericium erinaceus helps improve cognition by enhancing activity of choline acetyltransferase, which is responsible for the synthesis of acetylcholine in the body. This brain-boosting mushroom also helps promote production of nerve growth factor (NGF), a protein that plays a crucial role in maintaining and regenerating neurons.

Bacopa Monnieri

Bacopa is an herb commonly used in traditional Ayurvedic medicine for its positive influence on memory and focus. Studies indicate the bacoside compounds contained in this potent plant cross the blood-brain barrier and, like huperzine A, help boost levels of acetylcholine by limiting its breakdown by acetylcholinesterase. In this way, bacopa monnieri helps generate new neural pathways.

Ginkgo Biloba

Ginkgo is one of the world's oldest tree species, has been used for thousands of years in traditional Chinese medicine for its neuroprotective effects. Its root bark and leaves are rich in ginkgolide compounds, which help promote higher concentrations of acetylcholine in key regions of the brain responsible for decision-making and short-term memory recall. They are also beneficial for cerebral blood circulation. You can grow this in many places in Canada. Gingko biloba is a strong antioxidant and protects brain cells from free radiacal damage, improves blood flow, and supplies oxygen to the brain.

Rhodiola rosea

An herb used to stimulate nervous system, help anxiety, fatigue, and improves learning and memory function.

Ashwaghanda (Withania somnifera)

An herb that improves memory and cognition, and is antistress, antioxidant, anti-inflammatory. Good for adrenal stress.

Lions Mane

A mushroom supplement (which you can also grow at home). Said to stimulate production of nerve growth helping brain cells grow, enhances memory. Can easily get in powder form and add to muffins, breads, smoothies.

Cordyceps sinensis

A fungus that lives on caterpillars used as a traditional Chinese medicine, used for preventing and improving impaired learning and memory.

Acetyl carnitine

Acetyle carnitine increases nerve growth factor so you can regrow brain cells.

Acetyl carnitine arginate

Acetyl carnitine arginate neutralizes brain protein which is believed responsible for Alzheimers. It protects your neurons against the brain cell damage caused by beta amyloid plaque.

Uridine

Uridine supports regrowth of neurites which prevents memory loss while improving memory retention. It is a natural substance found in foods. We get uridine mainly from milk, is a good source of cytidine which creates phosphatichylcholine, a precursor for the neurotransmitter required for proper memory function and muscle coordination.

Gota Kola

Gota kola stimulates neurite growth in key areas in the brain. This plant is native to India and is used widely in Ayurvedic medicine. It has been used for nervous disorders like senility and epilepsy, and as a brain tonic to improve memory.

Rhododendron caucasicum

This is also known as the 'Snow Rose" - it grows in altitudes from 10,000 – 30,000 feet in the Caucasus Mountains of the Republic of Georgia (formerly part of the Soviet Union). Many think this plant is why the people of Georgia have such longevity. Foreign hospitals have used this

plant to treat heart disease, arthritis, gout, high cholesterol, blood pressure problems, depression, neuroses, and concentration problems. It has proved to be an excellent free radical scavenger. It protects and treats the brain, bolsters the cardio system and increases blood supply to the muscles and especially the brain.

Lycopene

This is a powerful antioxidant found in tomatoes, pink grapefruit, apricots, and watermelon. Studies have show diets high in lycopene may reduce the risk of cancer, especially tumors in the prostate, colon, stomach, lung or mouth. Also may help prevent cataracts and macular degeneration.

BEST DIET TO SUPPORT MEMORY FUNCTION:

Mediterranean diet is touted as the best diet for brain health, mostly because of the olives, olive oil, fish, vegetables and basically natural foods. Basically a diet with lots of raw foods. Eat something raw at each meal. Perhaps fruit at breakfast. Salads with lunch and dinner.

- **Diet with lots of raw foods. Eat something raw at each meal. Fruit at breakfast. Salads with lunch and dinner.**
- **Eat free range eggs and/or fish on a daily basis**
- **Other important foods: brown rice, legumes, navy beans, millet, soybeans, tofu, raw nuts, wheat germ, whole grains, brewer's yeast.**
- **Wheat and dairy may be a contributing factor. To test yourself, eliminate these for a month and see if memory improves, if not then slowly add them back into the diet.**
- **Bee Pollen is considered a food but do not eat it if you are allergic (get rashes, wheezing etc). Easy to sprinkle this on cereals and salads.**
- **Avoid refined sugars, these 'turn off' the brain.**
- **Gingko Biloba increases blood flow to the brain.**
- **Bacopa herb is herb now being used for memory.**
- **Eat free range eggs and/or fish on a daily basis**
- **Green leafy vegetables, at least six servings per week. Other vegetables, at least one serving per day - but join in on that brainy group by eating more!**
- **Berries, at least two servings per week**
- **Nuts (raw is best), at least five servings per week**
- **Olive oil and coconut oil are the best oils for your diet. The brain needs a lot of oil, it is made up mostly of cholesterol. Avocado oil may also be used.**
- **Whole grains, at least three servings per day**
- **Fish, not fried, at least once per week**
- **Beans, at least four meals per week**
- **Poultry, not fried, at least two meals per week**
- **Other important foods: brown rice, legumes, navy beans, millet, soybeans, tofu, raw nuts, wheat germ, whole grains, brewer's yeast.**

Other:

Practice holding your breath for 30 seconds every hour for 30 days. This improves mental alertness.
Keep the mind active, use the facilities to keep them working. Daily crossword puzzles help. Also, learn new things to force the mind to remember things such as learning a new language. Take up new hobbies that require you to learn new skills.
HGH (human growth hormone) has been shown to improve brain function.

Example of Daily Supplements to Support Brain Function:

- **Acetylcholine**
- **Choline (100+ mg three times a day) to increase levels of acetyl-choline**
- **Phosphatidylserine**
- **Manganese**
- **B Complex (50 mg twice daily), B5 (Pantothenic acid) extra 50 mg three times daily. B3 (Niacin) 50 mg three times daily - don't take niacin if you have liver disorder, gout or high blood pressure**
- **3,000-10,000 mg Vit. C in divided doses**
- **400 IU Vitamin E, working up to 1,200 IU daily. This has a thinning effect on the blood, may not want to take it if you are on coumadin or blood thinners, or you may want to decrease your blood thinners.**
- **50-80 mg Zinc daily. Do not exceed 99mg daily.**
- **Lecithin: 1 Tbsp three times a day before meals (or 1,200 mg capsule three times a day before meals)**
- **Amino acids: L Glutamine, and L-phenylalanine, plus L-aspartic acid. To be taken with water on empty stomach. Do not take L-phenylalanine if pregnant, nursing, or suffering from panic attacks, diabetes, high blood pressure or PKU.**
  Up to 100 mg L Tyrosine per kg of body weight daily. Take on empty stomach with 1,000 mg Vit.C and 50 mg Vit. B6.

NOTE: Often you can acquire a supplement for memory that has many of the above remedies built into the product. If you are really concerned, watch the diet and take a variety of different formulas to help with the memory, switching them on a daily basis so all the grounds are covered.