

## A Memory “Cocktail” to Eliminate Malfunctioning Brain Cells in Dementia

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As worldwide dementia research begins to define opportunities for cleansing the brain of malfunctioning neurogenerative cells, various vitamin and drug candidates already exist! Surprised?

Studies supporting success of available medicinal or vitamin candidates which help to rebuild memory ability by removing old, sick brain cells (senescent) that are unable to repair themselves or others that reprogram brain cells (astrocytes) to cleanse or destroy gooey amyloid plaque exist. AI (artificial intelligence) data research supports this quest. In various forms of dementia (Alzheimer’s, Lewy Body or Parkinson’s Disease) and perhaps even brain changes in MS (Multiple Sclerosis), cleansing of malfunctioning neurogenerative cells becomes important.

It is proposed by this Healthcare Advocate™ that using a multi-component clinical approach to increase memory and cognitive function (executive) can be achieved by using a combination of drugs approved twenty or more years ago, supplemented with known OTC (over the counter) memory enhancing vitamins. This combination of medicinals has shown the ability to demonstrate significant improvement in cognitive function, including both short and long-term memory. The improvement of memory, focus, mental energy, problem-solving or analytical skills and support to verbal recall is possible by using supplements called “nootropics”.

Most healthcare practitioners are aware of the double-blind clinical studies which have verified the value of DHA (Docosahexanoic acid) and EPA (Eicosapenanoic acid). These OTC fish oil supplements nutrients, preferably isolated from cold-water fish (tuna, salmon, herring, sable fish, sardines, mackerel, cod) and the omega 3 fish oil obtained, are powerful memory enhancing agents with special abilities. They work to reprogram the astrocyte cells found in the brain. The reprogrammed astrocyte cells serve as cleansing agents to eliminate the accumulation of plaque and support the de-tangling of neurons which cause brain fog, confusion and memory loss. Human clinical studies have verified the value of these ingredients in reducing memory loss.

DHA plays a key role in the development of nerve tissue and eye health. It is a polyunsaturated omega-3s fatty acid found throughout the body. It is a major structural fat, making up 97% of the omega-3s found in the brain and 93 percent of the omega-3s found in the retina of the eyes. It is also a key component of heart health. Often not known by healthcare practitioners is that DHA turnover in the body is very fast...the brain needs a daily steady supply. The daily dose of DHA needs to be 2000 mg.

EPA taken daily should be 450 mg in concert with EPA to help with inflammation that can occur which surrounds the accumulation of plaques and malfunctioning, sick brain cells.

Two plant-based carotenoids... lutein and zeaxanthin (both OTC) are critical to improving visual memory and reduction of inflammation surrounding brain cells in dementia. These two agents are powerful antioxidants which work to improve memory, promote focus and

alertness, enhance learning, reduce stress and fight cognitive decline. The literature is complete with publications from neuroscientists regarding these successes. Lutein accumulates in the brain to reduce inflammation and calm overactive neurons and decreases transmission errors relating to various executive functions. Daily quantities to be consumed orally of these two carotenoids should be 30 mg of lutein and 6 mg of zeaxanthin, preferably taken together.

A final consideration for the multi-component “cocktail” to improve memory, promote alertness and fight cognitive decline is the addition of phosphatidyl choline complex. This supplement promotes health cognitive function, supports cell membrane structure and helps to process cleansing of free radicals in fats by improving available choline in the brain. Why is this important?

Choline is an essential nutrient and building block of the brain nutrient acetylcholine which promotes neuronal excitability and influences or coordinates firing of group neurons involved in synaptic transmission. Acetylcholine also drives dopamine release, another neurotransmitter which promotes cellular energy and encourages transmission of neuron passage during brain activity.

Additional possible additions to this medicinal daily “cocktail” suggests that research conducted at the Rush University Medical Center in Chicago, Illinois confirmed the astrocytes (a type of glial cell) outnumber neurons in the brain five-fold. Although neurons are the cells of all higher functions (working memory, stress regulation, anxiety, moral reasoning, attention deficient/hyperactivity disorder or ADHD and impulse control), the astrocytes regulate increase in intracellular calcium which encourages astrocyte-astrocyte and astrocyte-to-neuron “communication”.

As astrocytes have been shown to be responsible for accumulation of amyloid beta (A $\beta$ ) which damages neurons, use of an older drug “cocktail” based upon gemfibrozil and retinoic acid effects the ability (in Alzheimer’s mouse studies) to cause a reversal in the accumulation of amyloid beta plaque by clearing or dissolving the gooey plaque that damages neurons. Gemfibrosil (1968) was an early cholesterol-lowering medication (brand name Lopid) and the vitamin A derivative retinoic acid (brand name Tretinoin-1957) has been used in many different conditions due to its “peeling or dissolving” ability of tissue. This drug “cocktail” accelerated the formation of miniature organs (lysosomes) within individual Alzheimer’s induced mouse brain cells which produced enzymes that dissolved worn-out cell parts. This cleansing action was demonstrated to reverse amyloid beta plaque deposits.

As a final comment, a current ongoing patient experience coordinated by this healthcare practitioner includes the patient’s daily oral consumption of the following medication “cocktail”:

- DHA 2000 mg as a single dose daily
- EPA 150 mg as a single dose daily
- Lutein 30 mg as a single dose daily
- Zeaxanthin 6 mg as a single dose daily
- Phosphatidyl choline complex 1200 mg as a single dose daily.

Importantly, noticeable improvements in memory are occurring. Addition of gemfibrozil and retinoic acid has been planned.

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