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REPORT

Protecting Against Brain Cell Aging

The brain is the seat of our identity. It contains the memories that determine who we are, and the thoughts that enable us to solve problems. The brain controls sex drive, reproduction, temperature, blood pressure, and resistance to disease through its regulation of our neuroendocrine, immune, and cardiovascular systems.

Brain aging is the number one cause of disease, disability, and death in the elderly. By helping to slow brain aging, we trigger a cascade of beneficial effects throughout the body which keep us strong, healthy, and youthful.

Brain aging can be defined as a progressive slowdown of metabolic action. When neuronal cell metabolism falls below the level required to support basic cellular functions, such as uptake of glucose for energy production, protein synthesis, and excretion of cellular debris, brain cells malfunction and eventually die. This leads to loss of memory and other cognitive functions, as well as a decline in the regulation of essential life systems.

These declines lead to brain disorders, such as Alzheimer's and Parkinson's disease, strokes, and indirectly to heart attacks, diabetes, arthritis, and other disabling and life threatening diseases.

An Epidemic Of Brain Diseases

The American Psychiatric Association recognizes "age-related cognitive decline" in healthy, normal people as an increasingly common affliction that has reached epidemic proportions in people over the age of 50. This decline is associated with a growing incidence of Alzheimer's disease, which is decimating the lives of its many victims and their families.

Moreover, new studies show that a decline in energy metabolism causes brain cells to be more vulnerable to blood flow disruption, which leads to an increasingly high incidence of paralysis and death in elderly people who suffer mild forms of cerebral vascular disease, transient ischemic attacks, multi-infarct dementia, and strokes.

The medical costs of treating the diseases associated with normal aging have been predicted to bankrupt the medicare system early in the 21st century. Unless we can develop and apply methods to slow brain aging on a wide scale, the United States will soon find itself in a financial crisis of extraordinary proportions.

Fortunately, a search of the scientific/medical literature reveals that brain cell aging can be slowed and even temporarily reversed. This issue will inform you of new protocols for slowing the rate of brain cell aging and protecting against cerebral vascular deficiency.

MAINTAINING BRAIN CELL FUNCTION

Members of The Life Extension Foundation have been consuming a variety of nutrients and drugs to enhance cognitive function. Some of these therapies also slow the rate of brain aging to improve their chances of remaining neurological competent as they grow older.

Smart drugs and nutrients work by helping to maintain healthy brain cell metabolic activity.

For brain cells to function, they must:

1. Absorb serum glucose through the cell membrane to produce energy.
2. Synthesize proteins to Perform youthful cellular functions.
3. Clear out debris so that the cell does not become clogged with lipofuscin, beta-amyloid and other waste by-products that have been linked to Alzheimer's and other age-related neurological diseases.

Inhibiting free radical damage with antioxidants is one way of slowing brain cell aging, but far more can be done to maintain metabolic activity in brain cells so that aging does not leave us neurologically disabled. Here is one of the most effective

methods of slowing brain aging.

NEW PHOSPHATIDYLSERINE EXTRACT

In 1988, we published an article about studies in Europe showing that phosphatidylserine could dramatically slow and reverse the rate of brain cell aging in laboratory animals. Phosphatidylserine restored mental function in older animals to levels exceeding those found in some younger animals. Although studies in humans with Alzheimer's disease were less dramatic, they still produced significant improvements in cognitive function.

In patients with mild dementia, significant cognitive and behavioral enhancing effects were observed, suggesting "global improvement in patient performance", according to one scientist.

In one study with mildly demented elderly patients, the improvement in neurological function continued 30 days after discontinuing phosphatidylserine (PS) therapy. This suggests that relatively low doses or cyclical dosing of PS therapy over an extended period of time in healthy people may produce sustained anti-aging results.

What excites us most about phosphatidylserine is its unique ability to initiate, maintain, and enhance all aspects of cell metabolism, which makes PS one of the most promising all-around antiaging therapies available. New research shows that in addition to improving neurological function, PS enhances energy metabolism in other cells of the body.

In addition to these cell energizing effects, PS also helps maintain brain cell membrane integrity and youthful synaptic plasticity. This means that PS protects cells against the functional and the structural deterioration that occurs as a result of aging.

The Life Extension Foundation was the first organization to make phosphatidylserine (PS) available to the American public.

In response to the ongoing flow of new evidence documenting the health benefits of PS, the European supplier of phosphatidylserine has made it available to Americans as a nutrient supplement.

SUGGESTED PROTOCOL

Brain tissues are particularly rich in PS, but it declines as a result of aging. Based upon the published research data, we suggest the following protocol for economical PS supplementation:

- ***Healthy middle aged adults - 5 cognitex capsules daily.***
- ***Healthy adults over 60 -- 5 cognitex capsules daily.***
- ***Adults suffering from brain cell aging -- 8 cognitex capsules daily.***

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