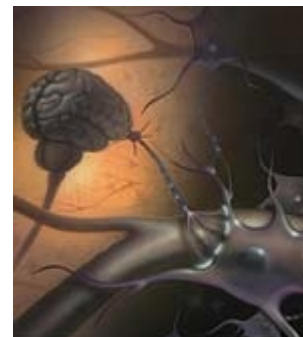


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New Brain Regeneration Nutrient Grows Neurites

Brain cells communicate with each other because they are connected by neurites (dendrites and axons). Neurites are long filament-like terminal branches of nerve cells that grow much like branches of a tree. Neurites function to provide the communication circuitry pathways between the nerve cells.



As we age, there is a loss of neurites, which results in slowed thinking as neural-connection pathways are reduced from many in number to only a few. The effect of the age-related neurite loss is that thought processing pathways, thinking time, and reaction times are all significantly diminished.

Acetyl-L-carnitine-arginate is a patented form of carnitine that stimulates the growth of neurites in the brain.* Studies show that acetyl-L-carnitine-arginate stimulates the growth of new neurites by an astounding 19.5% (as much as Nerve Growth Factor itself). Acetyl-L-carnitine-arginate acts together with acetyl-L-carnitine to increase neurite outgrowth.¹

Acetyl-L-carnitine by itself stimulates neurite growth after 5 days by 5.6%. Acetyl-L-carnitine-arginate, on the other hand, stimulates neurite outgrowth in the same time period by 19.5%...a more than three-fold increase!¹

An equally impressive finding was the average length of the neurites produced by the acetyl-carnitine-arginate—21% longer than in the acetyl-L-carnitine-only group.¹

When scientists compared the effects of acetyl-L-carnitine and arginine, the mixture gave the same growth results as acetyl carnitine by itself, i.e. 5.2%. This study showed that acetyl-L-carnitine-arginate induced 3.48 times more neurite growth compared to acetyl-L-carnitine mixed with arginine.¹

Acetyl carnitine arginate protects brain cells against the toxicity caused by the presence of B-amyloid, which is found in older and Alzheimer's brains and which causes disruptions in healthy cellular calcium 2+ balance.² Acetyl carnitine arginate also increases the neurotransmitter content of brain cells, maintains their proper structure (morphology) in terms of size and shape, and keeps them in their proper state of differentiation (specialization).³

Multiple Neurological Effects of Acetyl-L-Carnitine

The acetylated form of L-carnitine (acetyl-L-carnitine) facilitates the release and synthesis of acetylcholine by donating its acetyl group towards the production of acetylcholine, an important neurotransmitter. Acetyl-L-carnitine also enhances the release of dopamine from neurons and helps it bind to dopamine receptors.⁴⁻⁸ Numerous human and animal studies validate the multiple beneficial mechanisms that acetyl-L-carnitine exerts in the brain.⁹⁻²⁸

The amino acid acetyl-L-carnitine boosts mitochondrial energy production through its ability to facilitate fatty acid transport and oxidation within the cell.²⁹⁻³¹

Each capsule of the new Acetyl-L-Carnitine-Arginate formula provides:

Acetyl-L-carnitine arginate DHCl250 mg

Acetyl-L-carnitine HCl350 mg

New Acetyl-L-Carnitine Arginate Supplement

Since 1995, Life Extension members have been supplementing with acetyl-L-carnitine and deriving the many benefits this form of carnitine has shown in published scientific studies. With the discovery of acetyl-L-carnitine-arginate, the benefits of acetyl-L-carnitine can now be greatly augmented.

Acetyl-L-carnitine arginate has been added to the new Mitochondrial Energy Optimizer described in this special edition of *Life Extension*.

For those who prefer to take additional acetyl-L-carnitine- arginate, or are not taking the Mitochondrial Energy Optimizer, a new formula has been designed to replace the previous acetyl-L-carnitine stand alone supplement.

The suggested dose is three to four capsules per day.

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