

Precision Anti-Ageing: Addressing Dementia

A Comprehensive Guide to Modern Alzheimer's Prevention and
Non-Drug Interventions.

HALLMARK PRECISION HEALTH

Understanding Alzheimer's Disease

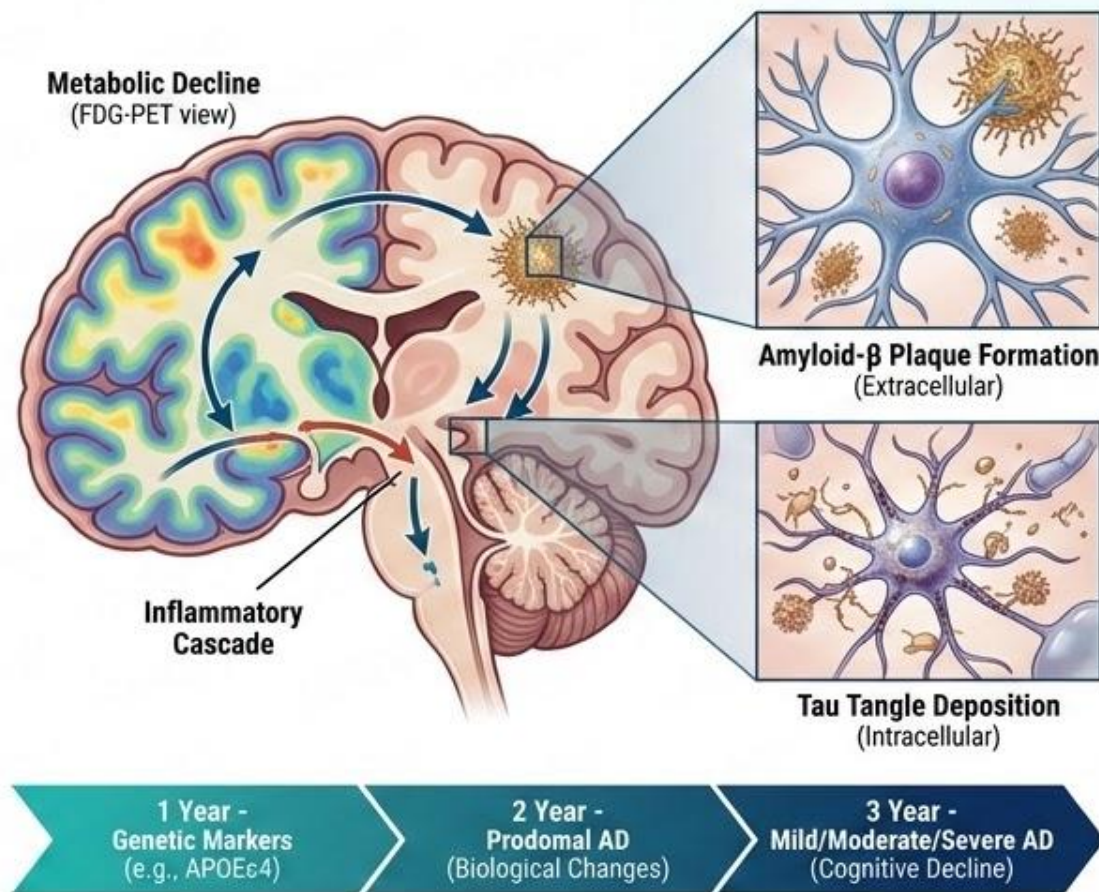
The Precision Context

Alzheimer's is a progressive neurodegenerative disorder characterized by biological markers that appear decades before cognitive symptoms manifest. Precision medicine focuses on early detection of these markers.

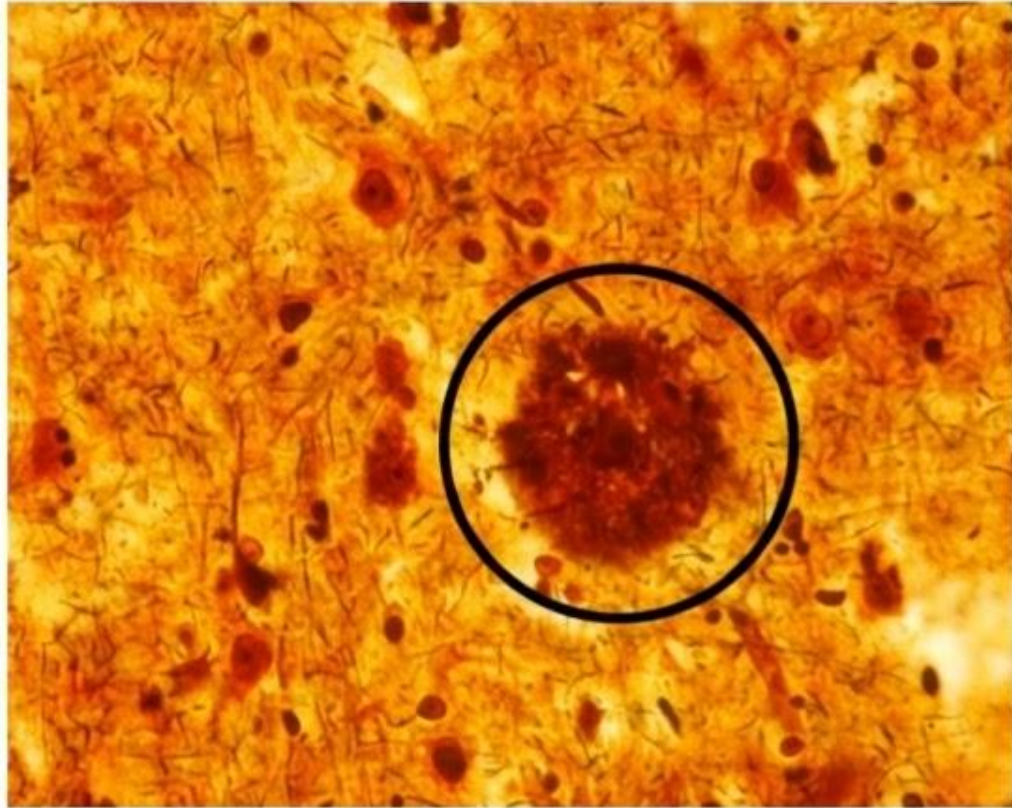
Sporadic vs. Early-onset AD

The inflammatory cascade

Cerebral metabolic decline



The Protein Cascade: Amyloid & Tau



Pathological Markers

Modern anti-ageing protocols target two core protein malfunctions in the brain's parenchyma:

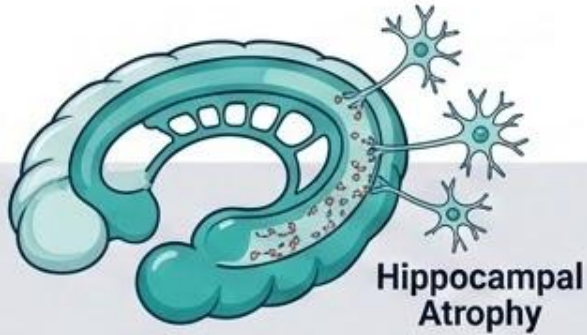


Amyloid- β Plaques: Extracellular protein aggregates that disrupt cell-to-cell communication.



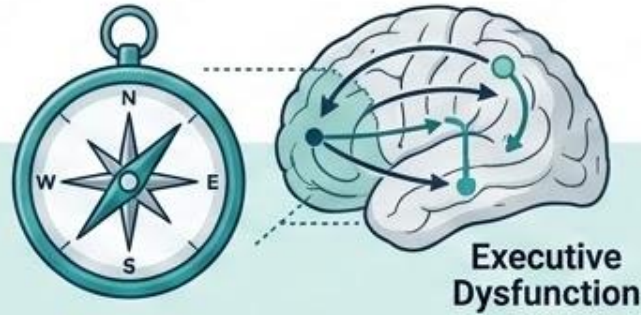
Tau Tangles: Intracellular threads that collapse the neuron's transport system, leading to cell death.

Functional Loss: Cognitive Landmarks



Memory

Loss of short-term recall and inability to encode new information (Hippocampal atrophy).



Executive

Diminished planning, problem-solving, and understanding complex instructions.



Language

Difficulties in word-finding and comprehension of nuanced social cues.

Intervention: MCT Oil & DHA

Neuronal Fuel & Structure

MCT Oil: Provides medium-chain triglycerides that the liver converts into ketones—an alternative energy source for glucose-starved brains.

DHA (Omega-3): A primary structural component of the human brain. Essential for maintaining membrane fluidity and synapse function.



Experience The *Maximum Benefit* Of MCTs

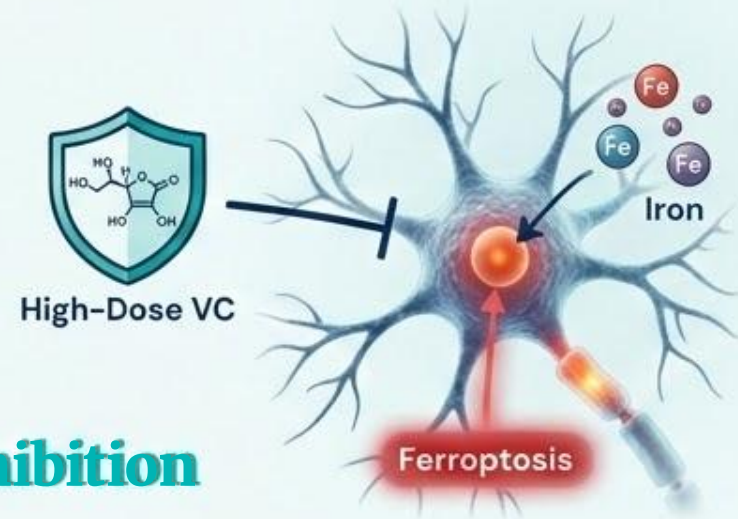
- AGING PERFORMANCE
- IMPROVED COGNITION
- WEIGHT MANAGEMENT
- INCREASED ENERGY
- FEWER CRAVINGS

The advertisement features a white bottle of BrainMD Brain MCT Energy with a blue label. The label includes the brand name 'BrainMD', the product name 'BRAIN MCT ENERGY', and the tagline 'Low-carb, High-energy. Eat. No sugar. No artificial sweeteners.' Below the bottle, five icons represent the benefits: a medal for 'AGING PERFORMANCE', a lightbulb for 'IMPROVED COGNITION', a scale for 'WEIGHT MANAGEMENT', a lightning bolt for 'INCREASED ENERGY', and an apple for 'FEWER CRAVINGS'.

Addressing Ferro-Ageing

IV

High-Dose Vitamin C



Ferroptosis & ACSL4 Inhibition

"Ferro-ageing" describes the age-progressive accumulation of iron that fuels lipid peroxidation and cellular senescence.

Mechanistic Pathway:

High Dose VC → ACSL4 Inhibition ↓ Ferroptosis

Research suggests long-term VC administration systemically reduces aging signatures and improves neurological function.



Immune Surveillance: Shingrix & D3



The Viral Link

New evidence links varicella-zoster virus (Shingles) to the progression of dementia. Shingrix vaccination is associated with a **20% reduction** in dementia risk.

Vitamin D3: Essential for neuro-immunomodulation. Low D3 levels correlate with faster amyloid plaque accumulation and cognitive decline.

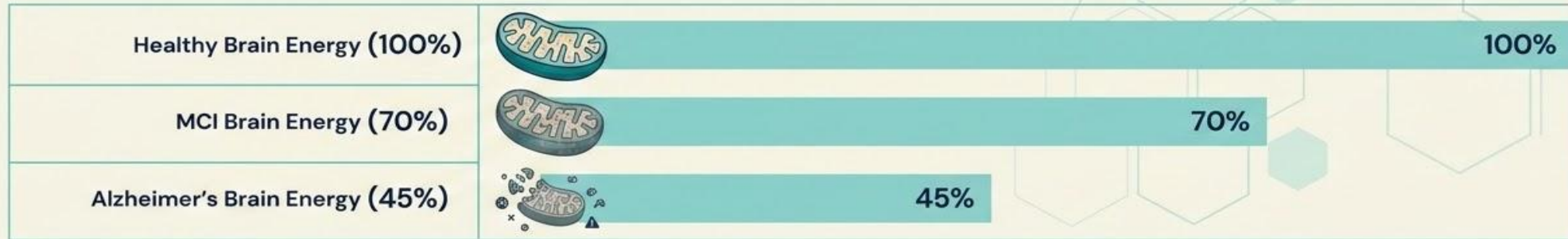
The Cellular Power Station - Mitochondria

Healthy Brain Energy (100%)

MCI Brain Energy (70%)

Alzheimer's Brain Energy (45%)

The Cellular Power Station - Mitochondria



Dementia is increasingly viewed as **Type 3 Diabetes**—a state of cerebral mitochondrial failure. Supporting mitochondrial health involves optimizing oxidative phosphorylation and reducing ROS production.

MCI (Mild Cognitive Impairment) shows early loss of mitochondrial function.

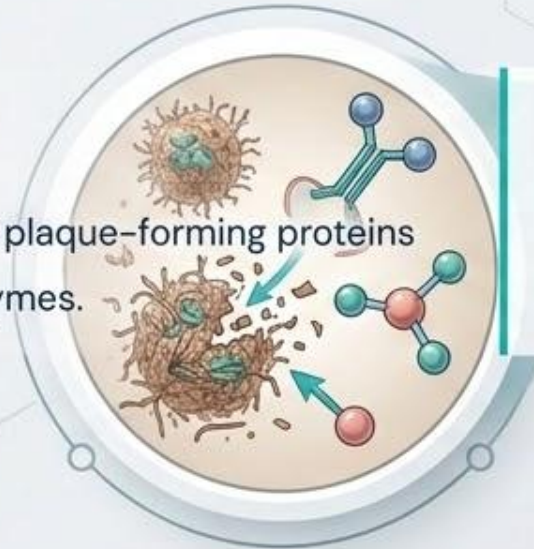
Neuroprotection: Lithium Orotate

The GSK3 Inhibitor

Low-dose Lithium Orotate (nutritional amounts) acts as a powerful protector of brain volume and cognitive integrity.

Amyloid Clearance

Reduces production of plaque-forming proteins by inhibiting GSK3 enzymes.

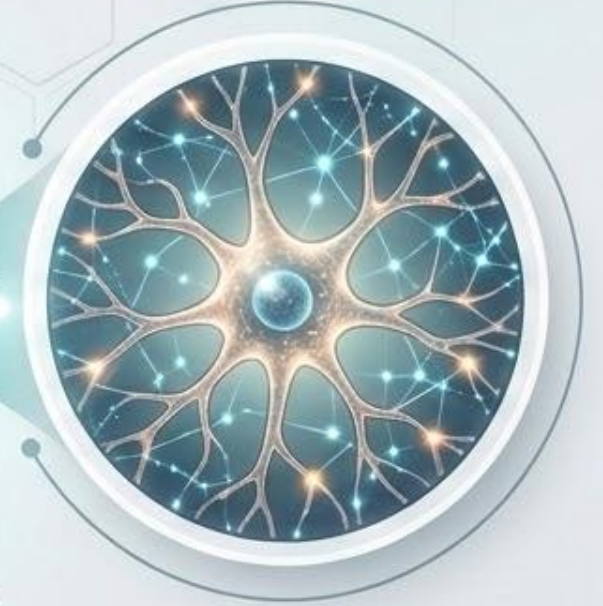


BDNF Stimulation

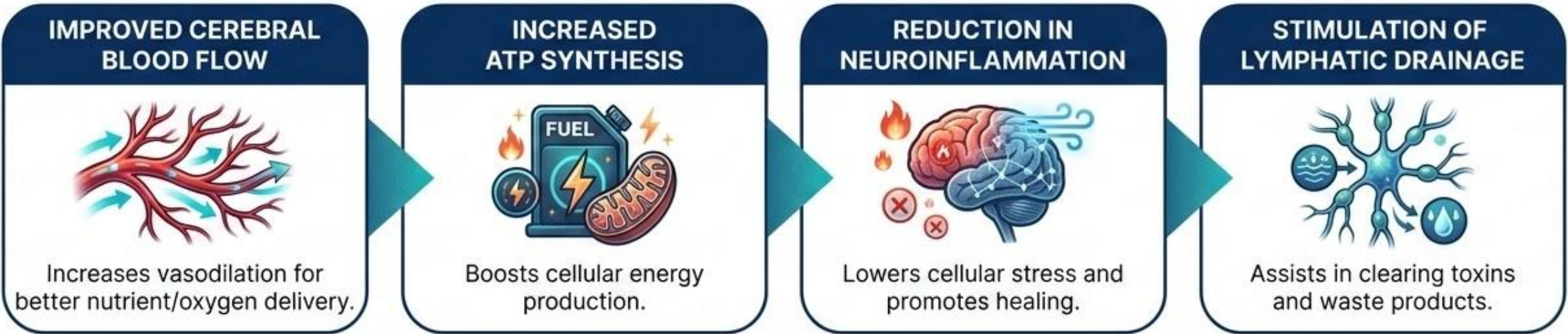
Increases Brain-Derived Neurotrophic Factor, promoting neuronal survival.



BDNF STIMULATION



Photobiomodulation Mechanism



Neuro-Regeneration: GHK-Cu

The Transcriptomic Repair Signal

GHK-Cu (Copper Tripeptide-1) serves as a broad-spectrum gene expression modulator, activating over 4,000 genes associated with tissue repair and neurological survival.



Neurotrophic Support: Upregulates BDNF, NGF, BDNF, NGF, GDNF



Anti-Inflammatory: Suppresses NF- κ B and pro-NF- κ B, TNF- α , IL-6 are inflammatory.



Mitochondrial Support: Delivers copper for Cytochrome c Oxidase.



Comprehensive neurotrophic factor upregulation.

Neuro-Regeneration: Klotho Protein

Neuro-Regeneration: GHK-Cu

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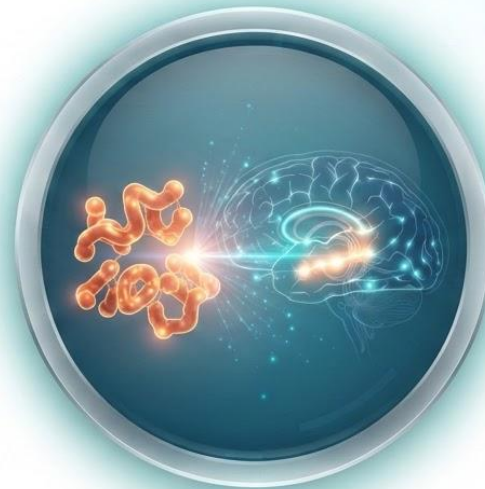
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Comprehensive neurotrophic factor upregulation.

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Lifestyle-driven restoration of neuroprotective pathways.

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Image Sources



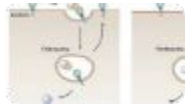
<https://www.news-medical.net/image.axd?picture=2015%2F12%2FAlzheimer1024-1.jpg>

Source: www.news-medical.net



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Source: www.alzforum.org



<https://brainmd.com/cdn/shop/files/Brain-MCT-Energy-Supplement-BrainMD-3.jpg?v=1769633755>

Source: brainmd.com



<https://www.mountainside-medical.com/cdn/shop/products/Shingrix-Shingles-Vaccine-20-Vials-Bulk-Pack.jpg?crop=center&height=500&v=1600379374&width=6>

Source: www.mountainside-medical.com



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Source: www.neuronic.online
