COGNITIVE AND MEMORY

Protocol Objective:

To support factors related to healthy brain aging and cognitive function.‡

Also refer to the Sleep Support Protocol, Neuro-Endocrine Support Protocol, Cardiometabolic Protocol, Hormone Specific™ Formula Protocols and GI Support Protocol.‡

CLINICAL OBJECTIVE‡	ASSESSMENT	PRODUCT RECOMMENDATIONS*	DOSING
Foundational support for memory and cognitive function	Subjective memory recall, episodic and verbal recognition tests; Brain imaging; ApoE4 genetic variant Biomarkers: amyloid-beta protein, plasma catalase, salivary amylase, sICAM-1	Ultra Preventive® 50+ Formula: 202547 + Optimized Curcumin with Neurophenol® Formula: 202524	2 tablets daily with food 2 capsules daily
Maintain healthy cytokine balance	Lab Analysis: Omega-3 fatty acid Index; Hs-CRP < 1.0 mg/dL; A/G ratio > 1.8, albumin > 4.5 g/dL	QÜELL® Fish Oil Ultra DHA Formula: 200980	2 softgels daily with food
		Wobenzym® Plus Formula: 201910	2 tablets twice daily without food
Provide brain fuel; support ketogenesis; support cerebral blood flow	Subjective brain fog, poor memory recall and recognition, fatigue Inefficient metabolism or delivery of glucose to the brain. Poor cerebral blood flow Measure ketone levels, target ketosis 0.5-4 mmol/L; Ketogenic diet or intermittent fasting diet	C8 Max MCT Powder Formula: 57743P	1 scoop 3 times daily or as needed
		MCT/Butyrate Liquid with SunButyrate™ Formula: 57689	1 tbsp. 3 times daily or as needed
		Keto Metabolic™ Formula: 57739P	1 scoop daily or as needed
Support cognitive performance	Acetylcholine function, cholinergic function/nerve growth factor (NGF), synaptic function	Acetyl-L-Carnitine 500 mg Formula: 82730	1-4 capsules daily
		Brain Memory Formula: 99580	1 capsule twice daily
Supports healthy brain aging by activating SIRT1	Sirtuin 1 (SIRT1) SNP (rs3758391 T-allele); ApoE4 allele	Resveratrol Formula: 200244 OR Methylated Resveratrol Plus Formula: 202557	1 capsule daily with food
Optimize mitochondrial function and antioxidant status	Lab Analysis: Organic Acids Test; Vitamin E target level 12-20	Juvenon Pro Cognitive Formula: 201308	3 capsules daily
		Ubiquinol-QH Formula: 201899	1-2 softgels daily
		PQQ Plus with BioPQQ® Formula: 200559	1-2 capsules daily
		Tri-En-All Formula: 98738	1 softgel daily with food
		Selenium Plus Formula: 81802	1 capsule daily with food



^{*}Please note that patients may not require all supplements listed.

The information contained herein is for informational purposes only and does not establish a doctor-patient relationship.

COGNITIVE AND MEMORY

CLINICAL OBJECTIVE [‡]	ASSESSMENT	PRODUCT RECOMMENDATIONS*	DOSING
Optimize Cu:Zn ratio	Lab Analysis: Supplement if zinc < 80 or copper:zinc > 1:3 Vitamin C target level 1.3-2.5	Zinc Picolinate Formulas: ZNP, 7440	1 tablet or capsule daily
		C-1000 Formula: 81407	1 capsule daily
Optimize healthy	Lab Analysis: Target levels: Homocysteine < 7	Homocystrol® + TMG Formula: 201329	3 capsules daily
methlyation, B ₁₂ , homocysteine metabolism	Vitamin B ₁₂ > 500 Folate 10-25 Vitamin B ₆ 60-100	Formula: 81407 Homocystrol® + TMG	1 ml daily
Optimize Vitamin D levels	Lab Analysis: Target 250H-D ₃ = 50-100 ng/ml		1 capsule daily
			1-10 drops daily
Support healthy	Lab Analysis:		1 capsule twice daily
insulin function	Target fasting insulin < 7; HgbA1c < 5.5	Formula: 201329 Liquid B ₁₂ Formulated with Methylcobalamin Formula: 200159 K ₂ -D ₃ With Astaxanthin Formula: 202114 Liquid Vitamin D ₃ Formula: 57738 Berberine Balance Formula: 201131 Chromium 1 mg Formula: 7411 Liposomal Glutathione	1 tablet daily
Support the body's natural detoxification process	Lab Analysis: Evaluate mercury, lead, arsenic, cadmium; mycotoxins		1 softgel twice daily
			1 capsule daily
			1 pack twice daily
			1/2 - 1 tablet before bed
Optimize sleep			1 capsule, 30-60 minutes before bed, without food

REFERENCES

Bredesen, D. AGING, Sept. 2014, Vol. 6, No. 9.

Disilvestro et al. The Ohio State University. Nutr. J. 2012 26;11:79.

Katherine HM Cox, et al. Journal of Psychopharmacology. 2014. 1–10.

Dal-Pan A, Dudonné S, et al. *J Alzheimers Dis.* 2017;55(1):115-135.

Dudonné S, et al. Food Funct. 2016 Aug 10;7(8):3421-30.

Micallef M.A., Munro I.A., Garg M. L. European Journal of Clinical Nutrition. 2009 63,1154-1156.

Cunnane S, et al. *Nutrition*. 2011 Jan;27(1):3-20.

Reger, M.A., et al. Neurobiology of Aging. 2014, 25;311, 314.

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Available for download at: douglaslabs.com/protocols



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