

# My Ageless Brain™: 7 Keys to Staying Sharp Whole Body-Brain Transformation

## COMPREHENSIVE LAB TEST LIST

**How and Where:** Go to your local hospital or laboratory, or drawing center (Quest, LabCorp, etc.---for this you'll need your local licensed health care practitioner to write you an order.)

Or order kits online [most of the tests below are available for self-pay without a doctor's order at [www.directlabs.com](http://www.directlabs.com), or [www.lifeextension.com](http://www.lifeextension.com) (click on "Blood Testing")] or [www.requestatest.com](http://www.requestatest.com) or as given below.

→**NOTE ON FASTING:** You'll need to fast (water only) from 8 PM the night before and best to go in the morning by 9 AM for most accurate results. Go ahead and drink water before you go to the lab in the morning. It will make your blood draw easier (your veins will be more accessible.)

**Date:**

**Ordering Physician Information:**

Physician Name:

Dr. Signature:

Fax Results to:

NPI #:

Phone Number:

License #:

Office Address:

**Patient Name:**

Birthdate:

Address:

Phone:

**Insurance:**

**ICD 10 Diagnosis Codes: (see codes provided at end of document)**

**ATTN LAB TECHNICIAN:** Please do only tests Checked below:

	Critical Tests	Test ONLY those checked below	Optimal Values	Comments; Lab Test Codes <i>Some CPT codes and LabCorp Codes are included for less common tests.</i>
<b>Inflammation and Protection</b>				
<i>ApoE4 is a marker for increased tendency for inflammation and therefore, for Alzheimer's, if not addressed with a comprehensive preventive approach.</i>	Apo E genetics (alleles)		2's (lower risk than average) 3's (average risk)	
<i>Measure of inflammation, cardiovascular risk factor</i>	hs-CRP		< 0.9	
<i>Builds up when B vitamins are inadequate; toxic to bones, brain and arteries if in excess</i>	Homocysteine		< 7	
<i>Major detox enzyme of the body</i>	Glutathione, total		176-323 LabCorp	
<i>Albumin is a nutritive protein made by the liver. Globulin</i>	Note: A/G ratio (albumin/globulin)-		Ratio: > or = 1.8	

<i>refers to antibodies. Elevated antibodies may indicate an over-active, inflamed immune system, autoimmunity or hidden infections among others.</i>	is included in CMP test- Comprehensive, Metabolic Panel- listed below		>4.5 (albumin)	
<i>Important vitamin for the nerves. But if in excess, toxic to nerves → numbness, tingling, etc</i>	Vitamin B6		60-100	
<i>Essential vitamin for nerve health. Needed for myelin production and repair (the protective coating on the nerve processes.)</i>	Vitamin B12		500-1500	
<i>Essential for metabolism, DNA synthesis, keeping homocysteine in check.</i>	Folate		10-25	
<i>Important antioxidant. Helps detox as well.</i>	Vitamin C		1.3-2.5	
<i>Important bone trophic (growth) hormone.</i>	Vitamin D-25-OH		50-80	
<i>Antioxidant, may help brain function. Can slow progression in mild-moderate Alzheimer's.</i>	Vitamin E		12-20	
<i>One of the most important metabolic factor in preventing and treating cognitive decline.</i>	Fasting insulin		< or = 4.5	
<i>The standard screening test for pre-diabetes and insulin sensitivity.</i>	Fasting Glucose- is included in CMP test- Comprehensive, Metabolic Panel- listed below		70-90	
<i>A measure of average blood glucose over 2 months. Very important to know as glucose can be normal fasting, but have unhealthy spikes after meals, for ex. Even healthy people should check this, though insurance may not pay unless diabetic.</i>	Hg A1c		<5.6	
<i>Cholesterol profile: an important marker for atherosclerosis risk.</i>	Total Cholesterol		>150	
<i>The “good” cholesterol that carries cholesterol back to the liver and out of the body.</i>	HDL		>50	
<i>The “bad” subtype of LDL, that is associated with increased atherosclerosis risk.</i>	sd-LDL (small, dense LDL)		<20	
<i>The number of LDL particles in a given unit of blood. More means smaller, dense LDL that is more atherogenic.</i>	LDL-p		700-1000	
<i>“Bad” cholesterol that has been attacked by free radicals. Can get laid down in the arteries.</i>	Oxidized LDL		<60	LabCorp -817472
<i>Increase atherosclerosis risk— often tied to excess sugar and carb intake. Can be high by heredity.</i>	Triglycerides		<150	
<i>Alcohol users should check this. Essential for nerve function and depleted by alcohol.</i>	RBC Thiamine (B1) pyrophosphate		100-150	
<i>A screen for gluten intolerance— antibodies against gluten,</i>	Anti-Gliadin IgG, IgA (Gluten sensitivity)		Negative	LabCorp- 161646, 161687

<i>promote inflammation.</i>				
<i>Adequate omega 3 is important for brain health and keeping inflammation in check.</i>	Omega 6: Omega 3 ratio		0.5- 3.0	
<b>TROPHIC Factors</b>				
<i>A measure of iron stores in the body. Low iron is associated with reduced cognition.</i>	Ferritin		> 30	
<i>Direct growth effects on brain cells, reduces cell death, promotes new cell formation, reduces inflammation. Value is for women. Men have no optimal minimum value and should avoid excess due to negative effects in males.</i>	Estradiol (E2)		50-100 F	
<i>Bioidentical progesterone has neuroprotective effects and is associated with improvement in working memory.</i>	Progesterone (P)		1-20	
<i>The “grandmother” hormone from provides “raw material” to make our reproductive hormones, DHEA, progesterone and cortisol. Key hormone as so many others depend upon it. Has direct growth-promoting effects on the brain</i>	Pregnenolone		50-100	
<i>Our “Stress Hormone”- unhealthy for brain if too high or too low</i>	Cortisol morning, fasting, ideally 7-9 AM		10-18	
<i>Important adrenal hormone for rejuvenation.</i>	DHEA-sulfate		350-430 W 400-500 M	
<i>“Male” hormone, also trophic for the brain.</i>	Testosterone		500-1000 M 3-41 F (LabCorp)	
<i>The active form of testosterone, it penetrates into the tissues where it exerts its effects.</i>	Free testosterone		6.5-15 M 0-4.2 F (LabCorp)	
<i>The active form of thyroid hormone.</i>	Free T3		3.2-4.2	
<i>Free T4 is transformed into free T3, which is the active form.</i>	Free T4		1.3-1.8	
<i>Increased in otherwise normal thyroid states in cases of extreme stress, starvation, and sickness</i>	Reverse T3		<20	
<i>Ratio of Free T3 to Reverse T3</i>	Free T3: Reverse T3		>20	
<i>Generally is the most sensitive measure of thyroid function. For ex., can increase due to a “sluggish” thyroid even when thyroid hormone levels are still normal.</i>	TSH		<2.0	
<i>The usual screen for Lyme exposure. Can be positive for life after Lyme exposure, even if you have never been sick with Lyme. Arguably, can be negative even if a person has active Lyme in the body.</i>	Lyme ab Screen		negative	

<i>Measures more precisely the antibodies against various proteins of the Lyme bacteria. Usually labs won't test for this unless the Elisa (above) is tested first and found to be positive.</i>	Lyme Western Blot		negative	"Igenix" or "DNA Connexions" labs offer more in-depth testing and may be positive when the Elisa and Western Blot are negative—Basic testing costs \$500+
<b>Minerals</b>				
<i>Important for the brain, calming, nourishing and deficiencies are very common.</i>	RBC-magnesium		5-2-6.5	
<i>Toxic to brain in high amounts. Should be in balance with equal amount of Zinc</i>	Serum Copper		90-110	
<i>Important for immunity and balance with Copper.</i>	Serum Zinc		90-110	
<i>Important anti-oxidant and for immunity and metabolism.</i>	Serum Selenium		110-150	
<i>Heavy metal screen (hair analysis or provoked urine test is more sensitive, but start here)</i>	Whole blood mercury, lead, arsenic and cadmium		< 5, <2, <7, <2.5 mcg/L, respectively	
<b>Standard</b>				
<i>Checks for anemia and the opposite, too many red blood cells (can indicate apnea or smoking--- lack of oxygen to the brain)</i>	CBC- Complete Blood Count			
<i>Measures overall kidney, liver function, electrolytes.</i>	CMP (comprehensive metabolic panel)			
<i>Liver enzyme—elevations indicate excessive toxic exposure. Do if you suspect toxic exposure or "sensitive liver". A level of 30 or greater is associated with elevated risk of diabetes</i>	Gamma-glutamyl transferase (GGT)		< 25	
<i>Rule out hidden urinary tract infections that can compromise immunity and increase inflammation. Also will detect kidney disease.</i>	Urinalysis with reflex C and S		negative	
<b>Hidden Inflammation- "CIRS"</b> Chronic Inflammatory Response Syndrome—can represent hidden viral infection, Lyme, mold exposure, heavy metals, etc				
<i>Increases permeability from blood into tissues</i>	MMP-9 – Matrix metalloproteinase-9		85-332	CPT 83520; LabCorp 500124
<i>Regulates immune cells. Can cause unhealthy changes in lungs and other tissues and autoimmunity, shortness of breath with exercise or other respiratory symptoms.</i>	TGF-Beta1 – Transforming Growth Factor-Beta1		< 2380	CPT 83520; LabCorp 905036
<i>Helps tissues increase their blood supply</i>	VEGF – Vasoactive Endothelial Growth Factor		31-86 (per S. Rapaport, MD)	CPT 83520; LabCorp 117021
<i>Supports the levels of many hormones, and in practical life,</i>	MSH – Melanocyte Stimulating Hormone		> 35	

<i>is esp. important for good sleep and avoiding excess urination.</i>				
<i>An enzyme involved in important DNA regulatory functions as well as metabolism of homocysteine and critical detox pathways. Certain gene variants can reduce your capacity for detox and increase your need for dietary and supplemental methylation sources.</i>	MTHFR- Methylentetrahydrofolate- Reductase, DNA mutation analysis			CPT 81291; LabCorp: 511238

**ICD 10 Diagnosis Codes for Tests Below (X'd diagnoses apply to this patient):**

- \_\_\_ Z13.220- Encounter for screening lipid disorders
- \_\_\_ R73.02 - Impaired glucose tolerance (oral), Elevated glucose tolerance
- \_\_\_ E61.8 - Deficiency of other specified nutrient elements
- \_\_\_ N95.8 – Other specified menopausal disorders
- \_\_\_ D89.89-- Other specified disorders involving the immune mechanism, not elsewhere classified
- \_\_\_ R65.10- SIRS of non-infectious origin w/o acute organ dysfunction
- \_\_\_ A69.22- Other neurological disorders in Lyme disease
- \_\_\_ E27.40- Unspecified adrenocortical insufficiency, Adrenocortical insufficiency NOS, Hypoaldosteronism
- \_\_\_ R53.81- Other malaise, Chronic debility, Debility NOS, General physical deterioration, Malaise NOS, Nervous debility
- \_\_\_ E08.00 Diabetes mellitus due to underlying condition w/ hyperosmolarity w/o nonketotic hyperglycemic-hyperosmolar coma
- \_\_\_ E55.9 Vitamin D deficiency
- \_\_\_ E21.3 Hyperparathyroidism, unspec
- \_\_\_ E83.51 hypocalcemia
- \_\_\_ M83.9 Adult osteomalacia
- \_\_\_ M81.8 Other osteoporosis without current fracture
- \_\_\_ R68.89 Other General Symptoms and Signs
- \_\_\_ K90.9 Intestinal Malabsorption, unspec.
- \_\_\_ D52.8 Folate defic anemia, other
- \_\_\_ R27.9 Unspec lack of coordination
- \_\_\_ E53.1 VIt B6 deficiency
- \_\_\_ G60.9 Hereditary and idiopathic neuropathy, unspec.
- \_\_\_ G25.89 Other specified extrapyramidal or movement disorders
- \_\_\_ G25.70 Drug-induced movement disorder
- \_\_\_ E43 Unspec severe protein – calorie malnutrition
- \_\_\_ D51.3 Other dietary B12 anemia, Vegan anemia
- \_\_\_ D51.8 Other Vit B12 deficiency anemias
- \_\_\_ E53.8 - Deficiency of other specified B group vitamins, Biotin deficiency, Cyanocobalamin deficiency  
Folate deficiency, Folic acid deficiency, Pantothenic acid deficiency, Vitamin B12 deficiency
- \_\_\_ R35.1 nocturia
- \_\_\_ R35.8 polyuria, other