Alzheimer's Cognoscopy

As discussed by Dr. Dale Bredeson in his book, "The End of Alzheimer's"

Test	Optimal Range
Genetics	
ApoE	Negative for ApoE4
Inflammation	
hs-CRP	<.9 mg/dL
Homocysteine	<7 micromolar
Vitamin B6	60-100 mcg/L
B12	500-1500 pg/ml
Folate	10-25 ng/ml
Vitamin D3	50-80 ng/ml
Vitamin C	1.3-2.5
Vitamin E	12-20
Omega 6:3 ratio	0.5-3.0
A/G ratio	>_ 1.8
Albumin	>4.5 g/dL
Fasting Insulin	< 4.5 microIU/ml
Fasting Glucose	70-90 mg/dL
Hemoglobin A1c	<5.6 %
Body Mass Index (BMI)	18-25
LDL particles or SD	700-1000 (particles), <20 (SD)
LDL (oxidized)	<60
Cholesterol	> 150
HDL	>50
Triglycerides	< 150
Glutathione (GSH)	5.0-5.5 micromolar
RBC thiamine pyrophosphate	100-150
IL- 6	<3 pg/ml

TROPHIC SUPPORT

Vitamin D3	50-80 ng/ml
Estradiol	50-250 pg/mL
Progesterone	1-20 ng/ml
Estradiol/progesterone ratio	10:100
Cortisol (am)	10-18 mcg/dL
Pregnenolone	50-100 ng/dL
DHEA Sulfate	350-430 mcg /dL women; 400-500mcg/dL men
Total Testosterone	500-1000ng/dL men
Free Testosterone	6.5-15 ng/dL men
Free T3	3.2-4.2 pg/ml
Reverse T3	< 20 ng/dL
Free T3: Reverse T3 ratio	>20
Free T4	1.3-1.8
TSH	<2.0 micro IU /ml

Toxin-Related

Blood Mercury	< 5mcgL
Lead	< 2 mcg/dL
Arsenic	<7 mcg/L
Cadmium	< 2.5 mcg/L
Hair Hg., Pb., Ar., Cd,	< 50th percentile
RBC Zinc (best)	12-14 mg/L
Zinc	90-110 mcg/dL
Copper: Zinc ratio	0.8-1.2
Copper – 3X ceruloplasmin	<_ 30
Gluten Sensitivity	cyrex array panels 3 and 4

Metals

RBC magnesium	5.2 mg/dL
Selenium	110-150 ng/mL
Potassium	4.5-5.5
Calcium	8.5-10.5

Sleep

Apnea –Hypopnea index (AHI)	**fewer than 5 events per hour preferably 0**
Micorbiome	**Rule out pathogens**
Cognitive Performance	**Evaluate CNS Vital Signs, Brain HQ or equivalent**

Mold Tests **-** ***https://www.survivingmold.com/diagnosis/lab-tests***

MSH - Melanocyte Stimulating Hormone

Normal Range: **35-81 pg/mL**

Alpha melanocyte stimulating hormone (MSH) has multiple anti-inflammatory and neurohormonal regulatory functions, exerting regulatory control on peripheral cytokine release, as well as on both anterior and posterior pituitary function.

In mold illness, MSH will be too low in over 95% of patients. This means increased susceptibility to mold illness, ongoing fatigue, pain, hormone abnormalities, mood swings, and much more. MSH is a hormone, called a regulatory neuropeptide, and it controls many other hormones, inflammation pathways, and basic defenses against invading microbes. Without MSH, bad things happen; chronic sleep disorders with non-restful sleep develop, and endorphin production is reduced, so chronic pain follows

TGF Beta-1 - Transforming Growth Factor Beta-1

Normal Range: **<2380 pg/ml**

TGF Beta-1 is a protein that has important regulatory effects throughout innate immune pathways. This protein helps control the growth and division (proliferation) of cells, the process by which cells mature to carry out specific functions (differentiation), cell movement (motility), and the self-destruction of cells (apoptosis). The TGF Beta-1 protein is found throughout the body and plays a role in development before birth, the formation of blood vessels, the regulation of muscle tissue and body fat development, wound healing, and immune system function (especially regulatory T-cells).

TGF Beta-1 can impair T-regulatory cell function, which in turn contributes to the activation of autoimmunity, yet TGF Beta-1 also plays a role in suppressing autoimmunity (!). TGF Beta-1 has become important in the exploding incidences of childhood asthma, raising the tantalizing issue of remodeling due to biotoxin exposure. The EPA says that 21% of all new cases of asthma are due to exposure to Water Damaged Buildings. If an individual develops wheezing after exposure to a water damaged building, look for remodeling to be the cause. Remodeling means "something" happens that the airway changes to be more reactive and in need of medications to reduce wheezing. Neurologic, autoimmune and many other systemic problems also are found with high TGF Beta-1.

C4a

Normal Range: **0-2830 ng/ml**

C4a has become the inflammatory marker of greatest significance looking at innate immune responses in those with exposure to Water Damaged Buildings (WDB).

The complement system is a group of proteins that move freely through your bloodstream. The proteins work with your immune system and play a role in the development of inflammation.

Each complement activates inflammatory responses, with spillover of effect from the innate immune response to acquired immune response and hematologic parameters.

These short-lived products are re-manufactured rapidly, such that an initial rise of plasma levels is seen within 12 hours of exposure to biotoxins, and sustained elevation is seen until definitive therapy is initiated.

Lab Tests for Mold Illness - Secrets of Survival

The laboratory tests that are ordered are blood tests done in labs around the world, and paid for by insurance companies. These tests hold the secrets of surviving mold illness. The names may be foreign to you, but since they are the things that hold the secrets to Surviving Mold, meet them today and perhaps know them as friends tomorrow.

You don't need to be an expert to read further, but you should not turn away from learning more. Take the time to learn the language of mold illness and this site will try to make things as understandable as possible.

No one says learning is easy, but that doesn't mean you can skip the learning process when it's your illness. Knowledge is power.

HLA DR - Your Genes

Human Leukocyte Antigens (HLAs), are found on the surface of nearly every cell in the human body. They help the immune system tell the difference between body tissue and foreign substances. The immune response genes are found on chromosome six. Patients could have two alleles, copies of genes (for each gene, one allele is inherited from a person's father, and the other is inherited from a person's mother), out of approximately 10 possible, as part of their genotype. Based on Dr. Shoemaker's data, in normal populations compared to international registries of gene frequencies of HLA DR, we know the frequency of mold illness-susceptible patients approximates 24% of the normally distributed population. Almost a quarter of the normal population is genetically susceptible to chronic mold illness. Three quarters isn't.

AGA IgA/IgG

Normal Range: **0-19**

Anti-gliadin (AGA) antibodies are produced in response to gliadin, a small protein that is part of gluten, biologically active of wheat, barley and rye. These antibodies were thought at one time to be specific for Celiac Disease.

Within 30 minutes of ingestion of gliadin, for those with anti-gliadin antibodies, there will be an inflammatory response. This inflammatory response can provide many symptoms, including some that mimic attention deficit disorder. We all know that some kids are labeled as having ADHD because of their abnormal behavior seen within 30 minutes of eating a cupcake. It is not the sugar in the icing; it is the gluten in the cake. Anti-gliadin antibodies are found in over 58% of children with biotoxin-associated illness.

ACTH/Cortisol

Normal Range: **ACTH - 8-37 pg/mL; Cortisol - a.m. 4.3-22.4 / p.m. 3.1-16.7 ug/dL**

ACTH is a hormone released from the anterior pituitary gland in the brain. Cortisol is a steroid hormone produced by the adrenal cortex, which is the outer part of the adrenal gland. The adrenal glands are located on top of both kidneys.

Early in the illness, as MSH begins to fall, high ACTH is associated with few symptoms; a marked increase in symptoms is associated with a fall in ACTH. Finding simultaneous high cortisol and high ACTH may prompt consideration of screening tumors, but the reality is that the dysregulation usually corrects with therapy.

VEGF

Normal Range: **31-86 pg/mL**

Vascular endothelial growth factor (VEGF) is a substance made by cells that stimulates new blood vessel formation and increases blood flow in the capillary beds. VEGF is a polypeptide. Deficiency of VEGF is quite common and is a serious problem in biotoxin illness patients that must be corrected. If you don't have blood flow, cells begin starve and don't work properly.

ACLA IgA/IgG/IgM

Normal Range: **IgA - 0-12; IgG 0-10; IgM 0-9**

Anticardiolipins (ACLA) are autoantibodies. Antibodies are proteins in the blood that the body produces to fight off foreign agents. Antibodies do this by creating an immunity against unfamiliar microorganisms. Autoantibodies are antibodies that are directed against one's self. They interfere with the normal function of blood vessels and react with proteins in the blood that are bound to phospholipid, a type of fat molecule that is a part of the normal cell membrane.

IgA, IgM, and IgG are autoantibodies often identified in collagen vascular diseases such a lupus and scleroderma, and are often called anti-phospholipids.

An increased risk of spontaneous fetal loss in the first trimester of pregnancy is not uncommonly seen in women with the presence of these autoantibodies. They are found in over 33% of children with biotoxin-associated illnesses.

ADH/Osmolality

Normal Range: **ADH - 1.0-13.3 pg/ml; Osmolality - 280-300 mosmol**

Antidiuretic hormone (ADH), or vasopressin, is a substance produced naturally by the hypothalamus and released by the pituitary gland. The hormone controls the amount of water your body removes.

Osmolality is a test that measures the concentration of all chemical particles found in the fluid part of the blood.

Symptoms associated with dysregulation of ADH include dehydration, frequent urination, with urine showing low specific gravity; excessive thirst and sensitivity to static electrical shocks; as well as edema and rapid weight gain due to fluid retention during initial correction of ADH deficits.

MMP-9

Normal Range: **85-332 ng/mL**

Matrix metallopeptidase 9 (MMP-9) is an enzyme that in humans, is encoded by the MMP9 gene. Proteins of the MMP9 family are involved in the breakdown of extracellular matrix in normal physiological processes, such as embryonic development, reproduction, and tissue remodeling, as well as in disease processes.
It has been implicated in pathogenesis COPD by destruction of lung elastin, in rheumatoid arthritis, atherosclerosis, cardiomyopathy, and abdominal aortic aneurysm.
MMP-9 delivers inflammatory elements of blood into subintimal spaces, where further delivery into solid organs (brain, lung, muscle, peripheral nerve and joint) is initiated.

Leptin

Normal Range: **Male: 0.5-13.8 ng/mL; Female: 1.1-27.5 ng/mL**

Leptin turns on how tightly the body holds onto fatty acids. When Leptin is high, one holds onto fatty acids and stores them in fat. This leads to rapid weight gain, and because of the high Leptin, standard approaches to weight loss like eating less and exercising more will fail. The inflammatory responses that cause Leptin levels to rise lead to patients who are chronically tired, in chronic pain, and forever overweight.