Anxiety, Depression, & Emotional Trauma Root Causes, Effects of Your Body & Directions for Treatment

Brought to you by:
Dr. Jess P. Armine
and
The Center For Bio-Individualized Medicine
www.drjessarmine.com

THE CENTER FOR BIO-INDIVIDUALIZED MEDICINE
FUNCTIONAL & INTEGRATIVE MEDICINE

What We Hope To Accomplish Tonight

- ✓Define Anxiety
- ✓Define Depression
- ✓Define Emotional Trauma
- ✓How Do the Above Effect Your Physiology
- ✓How to Determine Root Causes
- ✓What Are The Treatment Options

Anxiety is an *Emotion* characterized by:

- An unpleasant state of inner turmoil
- accompanied by nervous behavior, such as pacing back and forth, somatic complaints and rumination.
- It is the subjectively unpleasant feelings of dread over anticipated events, such as the feeling of imminent death.

Depression is an *Emotion*

- Depression is a state of low mood and aversion to activity that can affect a person's thoughts, behavior, feelings and sense of well-being.
- People with depressed mood can feel sad, anxious, empty, hopeless, helpless, worthless, guilty, irritable or restless.
- They may lose interest in activities that were once pleasurable

Emotional Trauma

- **(Emotional)Trauma** is an emotional response to a terrible event like an accident, rape or natural disaster.
- Immediately after the event, shock and denial are typical. Longer term reactions include unpredictable emotions, flashbacks, strained relationships and even physical symptoms like headaches or nausea.
- While these feelings are normal, some people have difficulty moving on with their lives.
  - American Psychological Association

Emotions are the ***EXPRESSION*** of the Neurotransmitters in your Brain

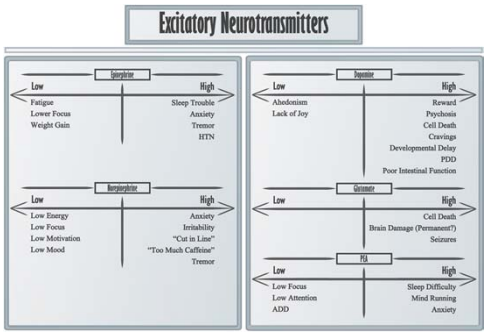
Reference: http://choosinghealthnow.com/blog/does-this-neurotransmitter-make-my-butt-look-fat/

The Center for Bio-Individualized Medicine 7

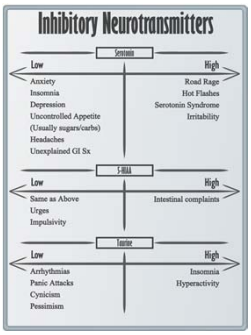
Neurotransmitters and their Functions

Neurotransmitters

The Center for Bio-Individualized Medicine 8



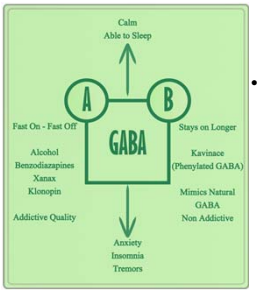
The Center for Bio-Individualized Medicine



The Center for Bio-Individualized Medicine

GABA

Gamma Amino Butyric Acid



- Gamma-Aminobutyric acid is the chief inhibitory neurotransmitter in the mammalian central nervous system. http://en.wikipedia.org/wiki/Gamma-Aminobutyric_acid

The Center for Bio-Individualized Medicine

Their Functions and the Associated Symptoms of Dysfunctions

Areas of the Brain

The Center for Bio-Individualized Medicine 12

Pre Frontal Cortex

ADD Here

Function	Dysfunction
Attention	Distractibility
Judgement	Impulsivity
Impulse Control	Poor Judgement
Critical Thinking	Lazy
Empathy	Tardy
Emotional Awareness	Lack of Forethought
Grows until age 25	Hyperactivity
	Procrastination
	Writer's Block

Dopamine - Epinephrine - Norepinephrine

The Center for Bio-Individualized Medicine

Anterior Cingulate

OCD & ODD Here

Function	Dysfunction
Gear Shifter	Stubborn
Cognitive Flexibility	Holds Grudges
Adaptability	Obsessions/Compulsions
Seeing Options	Addictions
Move From One Idea to the Next	PMS
	Road Rage
Go with the Flow	Oppositional
Cooperative	Argumentative

Serotonin

The Center for Bio-Individualized Medicine

Basal Ganglia

Anxiety Here

L — Language; Verbally Anxious; Homicidal Thinking

R — Internal Anxiety; Suicidal Thinking; Self Mutilation

Function	Dysfunction
Brain's Idle	Anxiety
Stay in the Moment	Panic Attacks
	Pessimism
	Conflict Avoidance
	Tense Neck/ Shoulders
	Tremors

GABA

The Center for Bio-Individualized Medicine

Thalamic/Limbic

Depression Here

Function	Dysfunction
Emotional Filter	Depression
Colors Experiences	Appetite/Sleep Problems
Tags Interior Importance	Decreased Sex Drive
Charged Emotions	Social Isolation
Libido	Increased Negative Thinking
Smell	
Appetite	
Sleep Cycles	

Serotonin

The Center for Bio-Individualized Medicine

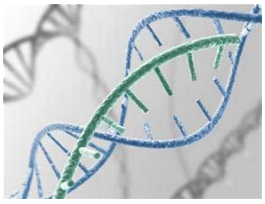
Temporal Lobe

Floor of the Brain

Function	Dysfunction
Left:	Left:
Process Language	Aggression
Short Term Memory	Fighting
Long Term Memory	Sensitive to Slights
Auditory Learning	Difficulty Finding Words
Complex Memories	Auditory Processing Problems
Right:	Right:
Facial Recognition	Difficulty with Faces
Decoding Vocal Inflections	Trouble Decoding Voices
Rythm-Music	Social Skill Trouble

Memory | Bipolar Disorder | Psychosis

The Center for Bio-Individualized Medicine



Genetic snps

Are There Genetic Predispositions?

The Center for Bio-Individualized Medicine 18

Acknowledgement

I want to thank Dr. Ben Lynch for allowing me to use many of his Pathway Planners in this lecture.

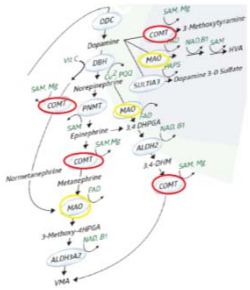
www.seekinghealth.com
World's Best Vitamins!!

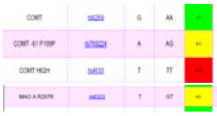
www.seekinghealth.org
Join the discussion forums!!
Methylation videos!!

Benjamin Lynch, ND
Pioneer, Innovator, Researcher,
Clinician, Helluva Nice Guy!

EXCITATION CAN CAUSE THESE SYMPTOMS, WHICH SNPS ARE IMPORTANT TO CONSIDER?

COMT, MAO



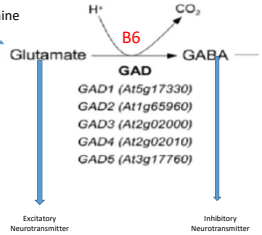


SNPS slow down the metabolism (drainage) of catecholamines and eventually, they will "overflow"

Papaleo, Francesco et al. "Genetic Dissection of the Role of Catechol-O-Methyltransferase in Cognition and Stress Reactivity in Mice." The Journal of neuroscience : the official journal of the Society for Neuroscience 28.35 (2008): 8709–8723. PMC. Web. 30 July 2015.

Simpson, Eleanor H. et al. "Genetic Variation in COMT Activity Impacts Learning and Dopamine Release Capacity in the Striatum." Learning & Memory 21.4 (2014): 205–214. PMC. Web. 30 July 2015.

INCREASED GLUTAMATE CAN CAUSE EXCITATION
What SNPs can cause that?
GAD



Association between glutamic acid decarboxylase genes and anxiety disorders, major depression, and neuroticism. Mol Psychiatry. 2006 Aug;11(8):752-62. Epub 2006 May 23.
Hettema JM1, An SS, Neale MC, Bukszar J, van den Oord EJ, Kendler KS, Chen X.

ROS, Aldehydes (Yeast)

SOD suspect mitochondrial involvement. Involved in MCS

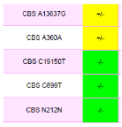
PON1 Organophosphates (Patient lives in a farming community)

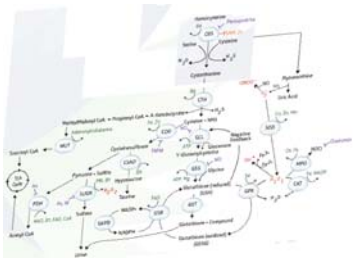
Suspect difficulty in metabolizing aldehydes.
Also involved in MCS

Cui, Xiaoyi et al. "Evaluation of Genetic Polymorphisms in Patients with Multiple Chemical Sensitivity." Ed. Aditya Khushan Pant. PLoS ONE 8.8 (2013): e71708. PMC. Web. 30 July 2015.

The Center for Bio-Individualized Medicine 22

TransSulfuration

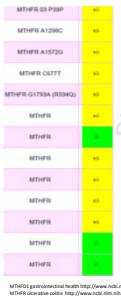


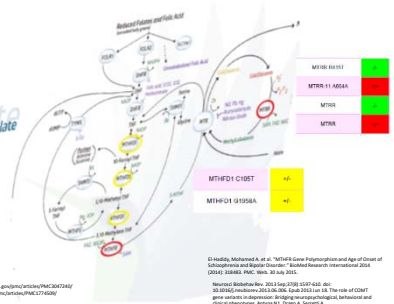


When it does express you may see brain fog, high ammonia on lab tests and/or high taurine on NT testing.

The Center for Bio-Individualized Medicine 23

METHYLATION





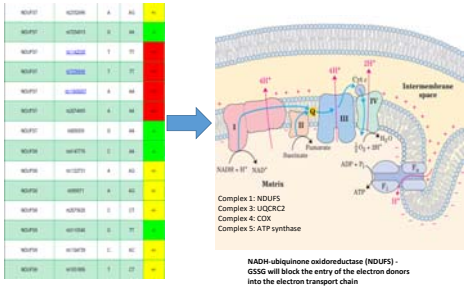
MTHFD1 gastrointestinal health http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3047240/
MTHFR ulcerative colitis http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1774026/

El-Haddy, Mohamed A. et al. "MTHFR Gene Polymorphism and Age of Onset of Schizophrenia and Bipolar Disorder." BioMed Research International 2014 (2014): 318483. PMC. Web. 30 July 2015.

Neurosci Biobehav Rev. 2013 Sep;37(8):1597-610. doi: 10.1016/j.neubiorev.2013.06.006. Epub 2013 Jun 18. The role of COMT gene variants in depression: Bridging neuropsychological, behavioral and clinical phenotypes. Antypa N1, Drago A, Serretti A.

The Center for Bio-Individualized Medicine 24

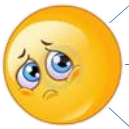
Mitochondrial Complex 1-The Most Important



NADH-ubiquinone oxidoreductase (NDUFS) - GSSG will block the entry of the electron donors into the electron transport chain

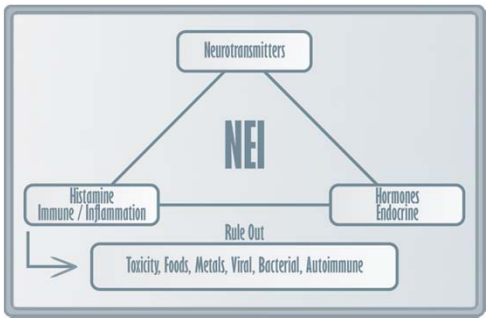
What Can Alter Our Neurotransmitters?

- Those Things that Damage the Cell:

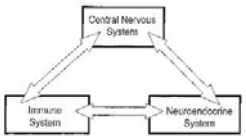


- Chemical /Physical
  - Heavy Metals
  - BPA, Benzene
  - Heat, Salt
  - Shock, Radiation
  - Trauma
- Microbial
  - Mold, Fungi
  - Bacteria, Parasites
- Psychological
  - Yelling, abuse
  - Isolation, abandonment
  - PTSD

Naviaux, R.K., Metabolic features of the cell danger response, Mitochondrion (2013), http://dx.doi.org/10.1016/j.mito.2013.08.006



Causes of Distress and Imbalances



Immune
- Toxins
- Xenobiotics
- Dietary peptides
- Dysbiosis
- Bacterial
- Viral
- Fungal
- Parasites

STRESS

Emotional Trauma

JUST as important as microbial and physical trauma.

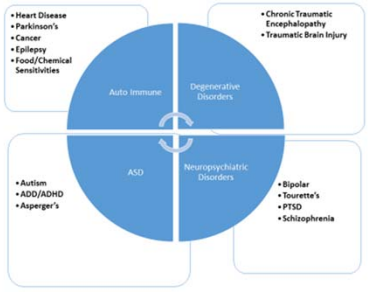
An event will most likely lead to emotional or psychological trauma if:

- It happened unexpectedly.
- You were unprepared for it.
- You felt powerless to prevent it.
- It happened repeatedly.
- Someone was intentionally cruel.
- It happened in childhood.

Commonly Overlooked Causes of Emotional Trauma

- Falls or sports injuries
- Surgery (especially in the first 3 years of life)
- The sudden death of someone close
- A car accident
- The breakup of a significant relationship
- A humiliating or deeply disappointing experience
- The discovery of a life-threatening illness or disabling condition

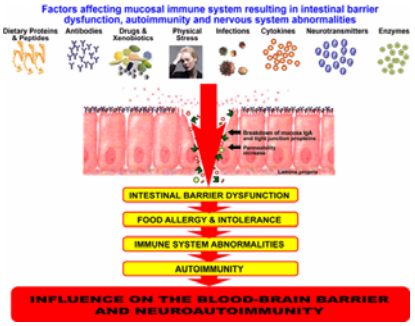
What will these cellular assaults cause?



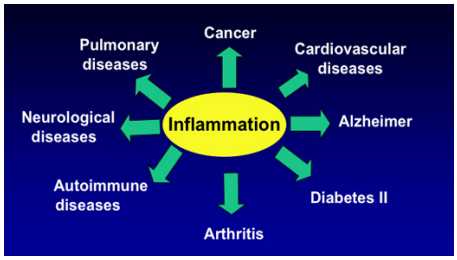
Of assault

The Method

Leaky Gut Creates Inflammation



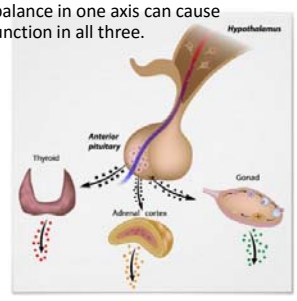
What can Inflammation do to us?



http://www.formulacrossfit.com/inflammatory-remarks-on-the-inflammatory-process/

HPA/HPT/HPG Axis

Distress or imbalance in one axis can cause dysfunction in all three.



http://rlv.zcache.com/the_hypothalamic_pituitary_axes_poster

How are they identified?

Mood Diso

The Center for Bio-Individualized Medicine 37

"Listen to your patient, he is telling you the diagnosis"

Sir William Osler, Bt
Founder Father of Johns Hopkins Medical Center[1]

[1]Tuteur, Amy (November 19, 2008). "Listen to your patient", The Skeptical OB. Retrieved April 9, 2012.

REMEMBER, In Real Estate, It's "Location, Location, Location."

In Health Care it's, "History, History, History!"

The Center for Bio-Individualized Medicine 38

The root causes

Look for

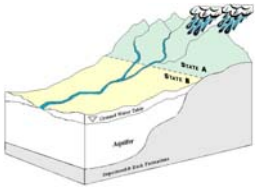
The Center for Bio-Individualized Medicine 39

- Neurotransmitter and stress hormone testing to identify the level of adrenal stress
- Looking at gut function for Leaky Gut Syndrome, food allergies, candida, dysbiosis, etc…
- Looking for immune dysfunction from possible metal allergies, chronic viral, bacterial, fungal or auto-immune disease.
- **Most of all, root cause analysis requires someone who can….**

The Center for Bio-Individualized Medicine 40

Think Like a Detective

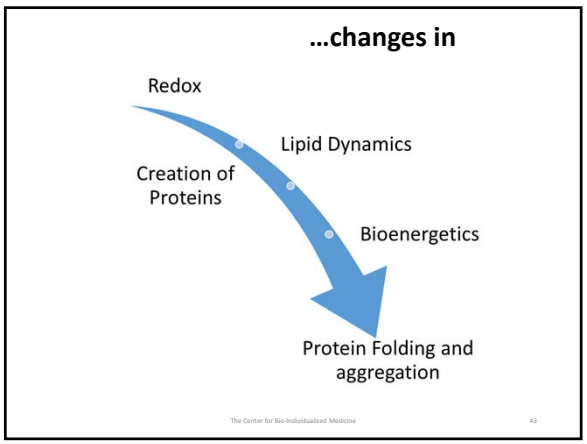
The Center for Bio-Individualized Medicine 41

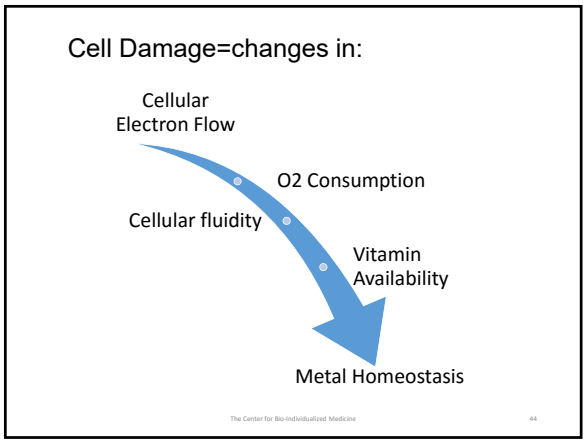


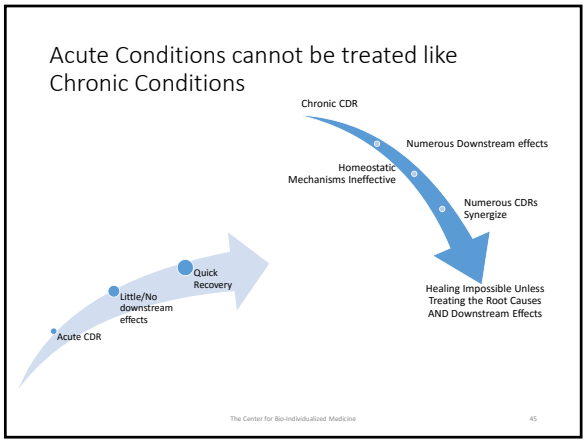
The downstream effects

Look For

The Center for Bio-Individualized Medicine 42


...changes in
Redox
Lipid Dynamics
Creation of Proteins
Bioenergetics
Protein Folding and aggregation
The Center for Bio-Individualized Medicine
43


Cell Damage=changes in:
Cellular Electron Flow
O2 Consumption
Cellular fluidity
Vitamin Availability
Metal Homeostasis
The Center for Bio-Individualized Medicine
44


Acute Conditions cannot be treated like Chronic Conditions
Chronic CDR
Numerous Downstream effects
Homeostatic Mechanisms Ineffective
Numerous CDRs Synergize
Healing Impossible Unless Treating the Root Causes AND Downstream Effects
Quick Recovery
Little/No downstream effects
Acute CDR
The Center for Bio-Individualized Medicine
45

If We Treat Symptoms:

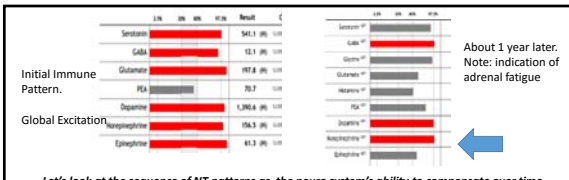
Primary Complaints of Depression & Anxiety

The Traditional Medical Route:

- Antidepressant Medications like Prozac, Zoloft, Lexapro (SSRI)
- If that doesn't work after 4-6 weeks. Then, maybe, Wellbutrin (SNRI, SDRI)
- If that doesn't work after several weeks, then maybe one of the newer meds like Pristiq or maybe referral to a psychiatrist for even stronger meds.
- Let's not forget the Ativan for the anxiety
- None of this gets at the CAUSE

Neurotransmitters Microbial Testing & More

Testing Options

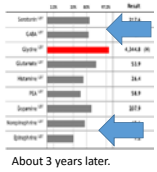


Initial Immune Pattern.

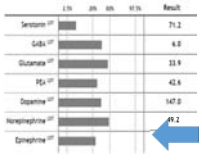
Global Excitation

About 1 year later. Note: indication of adrenal fatigue

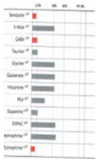
Let's look at the sequence of NT patterns as the neuro system's ability to compensate over time



About 3 years later. Inhibitory NTs are lower & more definite adrenal fatigue



10 years later, ALL NT's are on their way down



15-20 Years. Pretty Much Exhausted

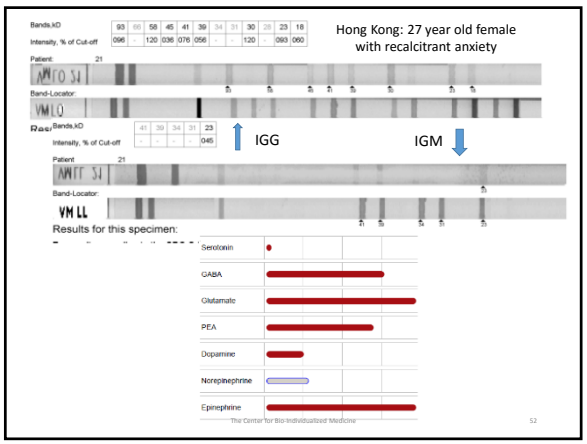
Microbial Involvement

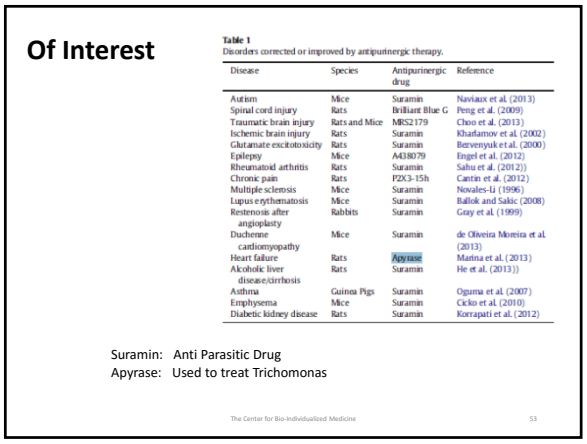
Children's Symptoms

Lyme pediatric specialist Charles Ray Jones, MD, compiled a list of common symptoms of infection in his young patients:
severe fatigue unrelieved by rest
insomnia
headaches
nausea, abdominal pain
impaired concentration
poor short-term memory
inability to sustain attention
difficulty thinking and expressing thoughts
difficulty reading and writing
being overwhelmed by schoolwork
difficulty making decisions
confusion
uncharacteristic behavior
outbursts and mood swings
fevers/chills
joint pain
dizziness
noise and light sensitivity

Dr. Jones has also documented congenital, or gestational, Lyme disease in some children who were infected in utero or by breastfeeding. *In these patients his suspicion is raised when the child has:*
•frequent fevers
•increased incidence of ear and throat infections
•increased incidence of pneumonia
•irritability
•joint and body pain
•poor muscle tone
•gastroesophageal reflux
•small windpipe (tracheomalacia)
•cataracts and other eye problems
•developmental delay
•learning disabilities
•psychiatric problems

http://www.lymedisease.org/resources/children.html


Hong Kong: 27 year old female with recalcitrant anxiety
IGG
IGM
Results for this specimen:
Serotonin
GABA
Glutamate
PEA
Dopamine
Norepinephrine
Epinephrine
The Center for Bio-Individualized Medicine
52


Of Interest
Table 1
Disorders corrected or improved by antipurinergic therapy.
Disease | Species | Antipurinergic drug | Reference
Autism | Mice | Suramin | Naviaux et al. (2013)
Spinal cord injury | Rats | Brilliant Blue G | Peng et al. (2009)
Traumatic brain injury | Rats and Mice | MRS2179 | Choo et al. (2013)
Ischemic brain injury | Rats | Suramin | Kharlamov et al. (2002)
Glutamate excitotoxicity | Rats | Suramin | Berversyuk et al. (2000)
Epilepsy | Mice | A438079 | Engel et al. (2012)
Rheumatoid arthritis | Rats | Suramin | Sahu et al. (2012))
Chronic pain | Rats | P2X3-15h | Cantin et al. (2012)
Multiple sclerosis | Mice | Suramin | Novales-Li (1996)
Lupus erythematosis | Mice | Suramin | Ballok and Sakic (2008)
Restenosis after angioplasty | Rabbits | Suramin | Gray et al. (1999)
Duchenne cardiomyopathy | Mice | Suramin | de Oliveira Moreira et al. (2013)
Heart failure | Rats | Apyrase | Marina et al. (2013)
Alcoholic liver disease/cirrhosis | Rats | Suramin | He et al. (2013))
Asthma | Guinea Pigs | Suramin | Oguma et al. (2007)
Emphysema | Mice | Suramin | Cicko et al. (2010)
Diabetic kidney disease | Rats | Suramin | Korrapati et al. (2012)
Suramin: Anti Parasitic Drug
Apyrase: Used to treat Trichomonas
The Center for Bio-Individualized Medicine
53


Treatment options
The Center for Bio-Individualized Medicine
54

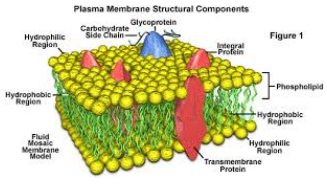
The Order of Treatment

"Reduce Stress,
Heal the Cells,
Heal the Gut,
Kill the Bugs!!"

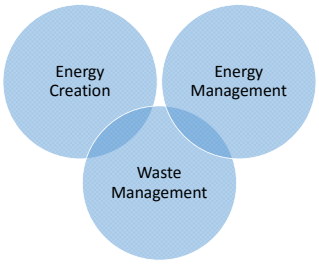
Foundational treatment

Reduce Stress

I Think We Sometimes Forget,
The *Foundation* of Life Happens in THE CELL!!



Basis of Cellular Function…



Neurotransmitters

Balance

TA AT

stands for

Targeted Amino Acid Therapy

Abbreviations.com

Dr. Kellerman

Neurogenetics and Nutrigenomics of Neuro-Nutrient Therapy for Reward Deficiency Syndrome (RDS): Clinical Ramifications as a Function of Molecular Neurobiological Mechanisms

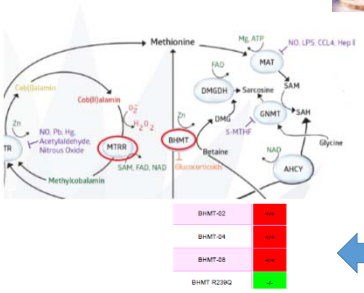
Kenneth Blum1,5,6,8,10,11,12,15,*, **Marlene Oscar-Berman**2, **Elizabeth Stuller**3, **David Miller**4,5, **John Giordano**6, **Siobhan Morse**6, **Lee McCormick**7, **William B Downs**5, **Roger L Waite**5, **Debmalya Barh**9, **Dennis Neal**9, **Eric R Braverman**1,10, **Raquel Lohmann**10, **Joan Borsten**11, **Mary Hauser**12, **David Han**13, **Yijun Liu**1, **Manya Helman**14, and **Thomas Simpatico**15

Treatment for Emotional Trauma

1. Emotional Release Technique
2. Cellular Emotional Release Technique
3. Emotional Release Technique Tapping
4. Emotional Trauma Therapy
5. Trauma Counseling Techniques
6. Emotional Healing Techniques
7. Trauma Group Therapy Techniques
8. Neuro Emotional Technique
9. EMDR (Eye Movement Desensitization and Reprocessing Therapy)

Medicines usually don't help get rid of the downstream effects of these root causes

BHMT



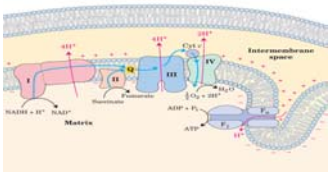
Pearl: Patients like this will internalize stress and/or have chronic dysthymia. People with this pattern who have PTSD will respond better to EMDR than psychotherapy (talk therapy)

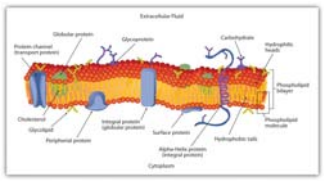
Obeid, Rima. "The Metabolic Burden of Methyl Donor Deficiency with Focus on the Betaine Homocysteine Methyltransferase Pathway." *Nutrients* 5.9 (2013): 3481–3495. *PMC*. Web. 30 July 2015.

To Address Mood Disorders, you MUST consider

Not only Neurotransmittter imbalances but:

- Causes of inflammation
- The integrity of the cell wall
- Mitochondrial function
- Nutritional deficiencies
- Genetic polymorphisms
- Nutrigenomics
- And more…





The Center for Bio-Individualized Medicine 64

But if you want to get well…

The Center for Bio-Individualized Medicine 65

THE CENTER FOR BIO-INDIVIDUALIZED MEDICINE
FUNCTIONAL & INTEGRATIVE MEDICINE

Working Together to Create a Healthier World

Dr. Armine consults with patients and practitioners worldwide.

Email: Office@DrJessArmine.com
Phone: 610 449 9716
www.DrJessArmine.com
Schedule at www.drjessarmine.com

The Center for Bio-Individualized Medicine 66

Evidenced Based References

- NEI: https://www.neurorelief.com/index.php?p=cms&cid=108&pid=85&type=1
- Brain Basics: http://www.nimh.nih.gov/health/educational-resources/brain-basics/brain-basics.shtml
- The Brain from Top to Bottom: http://thebrain.mcgill.ca/flash/i/i_01/i_01_m/i_01_m_ana/i_01_m_ana.html
- Neurotransmitters, An Introduction: http://mybrainnotes.com/serotonin-dopamine-epinephrine.html
- Epigenetics of depression. Lolak S, Suwannarat P, Lipsky RH. Prog Mol Biol Transl Sci. 2014;128:103-37. doi: 10.1016/B978-0-12-800977-2.00005-X. PMID: 25410543

The Center for Bio-Individualized Medicine