

Managing Mood Disorders

Part 1: Epidemiology, Stress, Homeostasis, Allostasis and Philosophical Approach



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**THE ECLECTIC TRIPHASIC
MEDICAL SYSTEM (ETMS)**



My Healing Philosophy

Before I begin with a patient – I PRAY. I look at the individual just as you must. I can only help one person at a time. I can only love one person at a time. Just one, one, one. So you begin...I begin. Adapted from Mother Teresa

"Wellness can be defined rather abstractly as intellectual, spiritual, emotional, and physical vitality; engaging in attitudes and behaviors that enhance the quality of life." – Donald Yance

“Our listening creates a sanctuary for the homeless parts within another person”. Rachel Naomi Remen

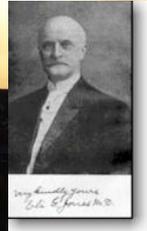


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Traditional Herbal Medicine

The underlying philosophy of Traditional Herbal Medicine expresses the basic premise that healing comes from the wisdom of God, and it is inherently found in Nature (Gaia). This spiritual wisdom dwells within all human beings.

“Lives of great men all remind us
We can make our lives sublime,
And departing leave behind us
Footprints on the sands of time.” – Eli Jones



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Our Motto

- To Love the Truth
- To Prove the Truth
- To Apply the Truth
- To Promote the Truth

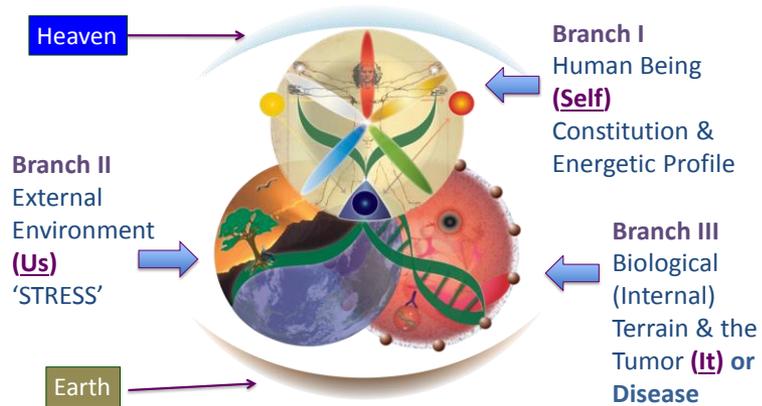


Eclectic Triphasic Medical System (ETMS)



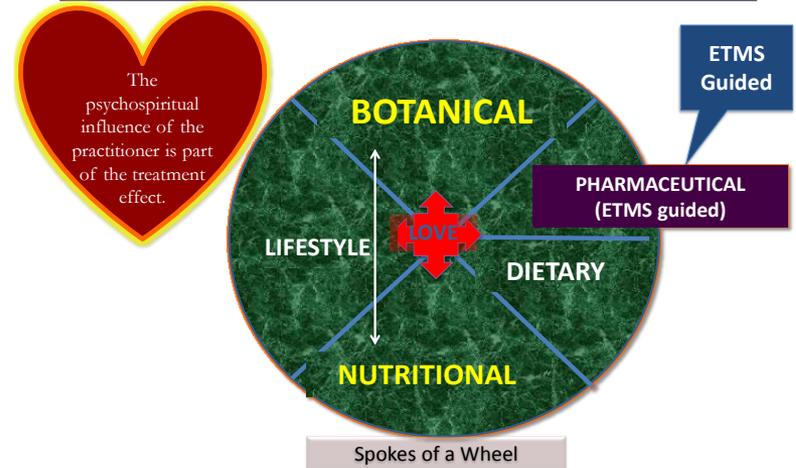
- **Eclectic:** Drawn and integrated from diverse philosophies, ideas, and educated choices for a broadened perspective
- **Triphasic:** Three different yet interrelated aspects
- **Medical:** Dedication to the art and science of healing
- **System:** Organization of interactive elements, ideas, and principles that guide actions toward a common, unified objective

The Three Main Branches of the ETMS



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ETMS Toolboxes

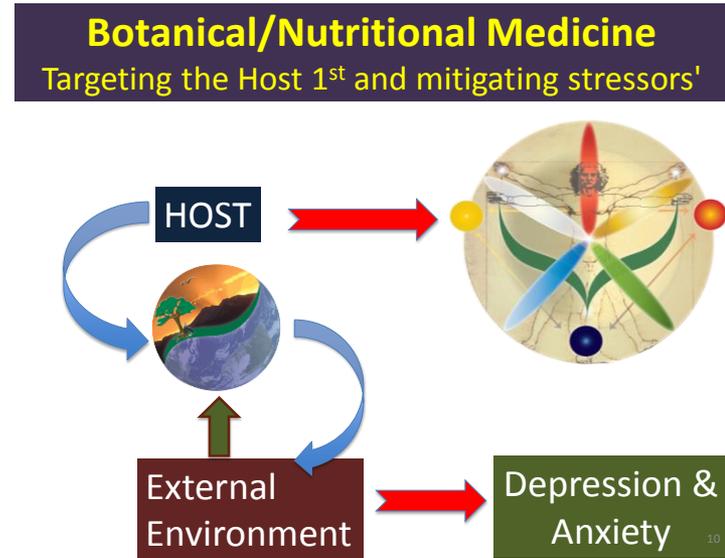


Integrative Approach to Mood Disorders - Overview

- Mood disorders such as **depression and anxiety** are **prevalent** and often **co-exist**. **Stress** plays a major role and is a significant **trigger**.
- Along with diet, lifestyle, and other supportive practices and therapies, botanical and nutritional medicines are an **ideal therapeutic method to effectively manage stress**.
- These therapeutic 'toolboxes' assist with balancing hormonal and neurotransmitter responses and calming, nourishing, and **fortifying the nervous system**, thereby elevating mood and behavior, and optimizing brain health.



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Depression and Anxiety



- Currently two of the most common mental disorders, affecting nearly 55 million people in the United States (US) alone.
- Depression and anxiety are strongly associated (and mostly likely major contributors to) with an increase in morbidity and mortality.

Laura A. Pratt, Ph.D.; Debra J. Brody, M.P.H.; and Qiuping Gu, M.D., Ph.D.; U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES Centers for Disease Control and Prevention; Oct. 2011, Int J Geriatr Psychiatry. 2010 Dec;25(12):1209-21, Arch Gen Psychiatry. 2005 Jun;62(6): 617-27.

Epidemiology Depression

- Fourth highest cause of disability worldwide.
- 11% of Americans aged 12 years and over take antidepressants.
- About 1/3 of those suffer from severe depression.
- Women are affected 2x as often as men. (reported cases)
- From 1988-1994 through 2005-2008 the rate of antidepressant use in the US increased nearly 400%.
- Among persons taking antidepressants, approximately 14% take more than one antidepressant.
- \$83+ billion spent per year.

Laura A. Pratt, Ph.D.; Debra J. Brody, M.P.H.; and Qiuping Gu, M.D., Ph.D.; U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES Centers for Disease Control and Prevention; Oct. 2011, Arch Gen Psychiatry. 2005 Jun;62(6): 617-27.

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Epidemiology Anxiety

- 18.1% of adults in the US (22% severe).
- 25.1% of 13-18 yr. olds in the US (5.9% severe).
- Recent studies into stress at the epidemiological level have found that diagnosis of anxiety disorders (often related to chronic stress) have risen sharply.
- Women are also 2x as likely to be affected as men.
- \$42+ billion per year is spent for anxiety conditions.

Arch Gen Psychiatry. 2005 Jun;62(6): 617-27; Gregg, D. G. (2010). Designing for collective intelligence. Communications of the ACM, 53(4), 134. doi:10.1145/1721654.1721691

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Antidepressant Use in the US

- In the US has increased nearly 400% in the last two decades, making antidepressants **the most frequently used class of medications** by Americans ages 18-44 years.
- By 2008, almost 25% of women ages 40–59 years were taking antidepressants.
- The CDC, on May 3, 2013, reported that the suicide rate among Americans ages 35–64 years increased 28.4% between 1999 and 2010 (from 13.7 suicides per 100,000 population in 1999 to 17.6 per 100,000 in 2010).

NCHS Data Brief, No. 76, October 2011; CDC, Suicide Among Adults Aged 35–64 Years — United States, 1999–2010; May 3, 2013 / 62(17);321-325

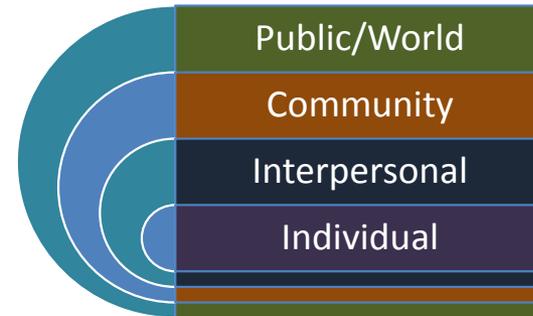
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Factors & Contributors

- Anxiety and depression, although different, often occur together.
- May be triggered by a variety of (coconspirators) factors including: nutritional, psychological, physical, emotional, environmental, social, and spiritual factors, as well as genetic tendencies or brain disease.
- The truth is that *everyone* is affected by anxiety and depression at some point, whether in response to a real threat, or a perceived one.
- But when either begins to arise regularly in the absence of an actual threat, they can have serious negative effects on both our short-term and long-term health.

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Stress and the Physical Environment



The individual is surrounded and influenced by multiple relationships at various levels.

**“I Fear the Day That Technology
Will Surpass Our Human
Interaction”**



A. Einstein

Cell Phone

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**Technology replacing personal
interactions at what cost?**



This will be short because I need to update my status on Facebook from "in a relationship" to "single."
I need to let my partner know how I feel so I'll text them before I submit the change. Isn't technology cool, as in cold.

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Smartphones replacing personal interactions at what cost?



- Technology can connect us to the world, but can disconnect us from each other,
- Cell phones can have a negative impact on close relationships, closeness, connection, and conversation quality.
- For happiness humans require three things 1) to give love 2) to receive love, and 3) feel a sense of belonging

Journal of Social and Personal Relationships May 2013 vol. 30 no. 3 237-246, Behavior & Information Technology, 24, 111-129. ¹⁹

Humanity Needs Three Types of Nourishment

- 1) Celestial – Respiration (Breathing)
- 2) Earthly – Food and water
- 3) Spiritual (Heavenly) – Giving and receiving Love "You can't live a perfect day without doing something for someone who will never be able to repay you." **John Wooden**



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General Conventional Approaches

- Pharmacotherapy
 - Antidepressants (SSRI's)
 - Anxiolytics (benzodiazepines) – increase risk of dementia
(BMJ 2012;345:e6231 doi: 10.1136/bmj.e6231)
 - Amphetamines (ADD & ADHD) - neurotoxic effects (Arch Toxicol. 2015 Mar 6.)
 - Antipsychotics
 - Mood stabilizers
 - Psychotherapy- Cognitive Behavior Therapy
- Drug companies spend nearly four billion dollars a year marketing directly to us, they spend an estimated 24 billion dollars a year Marketing directly to doctors.
- <http://www.dailykos.com/story/2015/02/09/1363367/-John-Oliver-breaks-down-Big-Pharma-and-it-s-hilariously-ugly#>

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Conventional Treatment Drawbacks

- Disappointing remission rates - A staggering 40 percent of individuals afflicted with depression do not react to popular antidepressants
- High rates of non-adherence due to:
 - Expense & duration of treatment
 - Social / cultural stigma
 - Medication side effects such as: addiction, weight gain, irritability, lethargy, sexual dysfunction, opposite effect (ie; depression or anxiety)

Jackson JL, Shimeall W, Sessums L, et al. Tricyclic antidepressants and headaches: systematic review and meta-analysis. *BMJ* : *British Medical Journal*. 2010;341:c5222.

Common Pharmaceutical Medications for Depression

- Fluoxetine (Prozac)
- Citalopram (Celexa)
- Sertraline (Zoloft)
- Paroxetine (Paxil)
- Escitalopram (Lexapro)
- Fluvoxamine (Luvox)
- Serotonin and norepinephrine reuptake inhibitors (SNRIs) are similar to SSRIs and include:
 - Venlafaxine (Effexor)
 - Duloxetine (Cymbalta)

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Biochemistry of Depression: Neurotransmitters & Depleted Neuron Firing

- When an inadequate amount of neurotransmitters are released ('depleted neuron firing'), the normal impulse fails, **resulting in symptoms of depression.**

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Stress and Neurotransmitter Depletion

- When a person finds themselves in the position of being subjected to **chronic stress**, the individual will “fire off” their neurons at a rapid rate in an attempt to “solve” the problem or escape from the stress.
- If the stressors are external, the person may be able to restructure their life to decrease the chronic stress.
- **In the situation where the individual can not escape chronic stress, the body becomes depleted in one of the neurotransmitters.**

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Biochemistry of Anxiety

- The biochemistry of anxiety is complex and vast.
- Studies have shown that nearly every type of neurotransmitter and hormone can play some role in anxiety, as can anything that reduces blood flow to the brain (like dehydration).
- Anxiety, in many ways, is simply your body's reaction to brain stress. When something causes any changes to your brain, experiencing anxiety is often the result.

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Major Neuropeptides and hormones Involved in Anxiety Disorders

- Epinephrine/Norepinephrine
- Cortisol
- Dopamine
- Serotonin
- GABA
- Thyroid Hormone
- Endorphins

*Anxiety is often a warning sign that your brain gives you indicating that something is wrong.

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Enhancing and Harmonizing Key Neurotransmitters for Mood

- **Dopamine** - has many functions in the brain, including important roles in behavior and including cognition, movement, and feelings of pleasure and reward, involved in sexual gratification, sleep, mood, attention, working memory, and learning. Schizophrenia - too much and Parkinson's - too little.
- **Serotonin** – transmits signals between nerve cells and is in part, responsible for regulating brain functions such as mood, appetite, sleep, and memory.
- **GABA (*gamma-Aminobutyric acid*)** - plays the principal role in reducing neuronal excitability throughout the nervous system. Neurons that produce GABA as their output are called GABAergic neurons. Benzodiazepine site of action is the GABA_A receptor. Lorazepam (Ativan) → long-lasting

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Stress, Anxiety and Depression are Linked to Other Serious Health Conditions

- Heart Disease (especially adverse outcomes)
- Insulin / Anabolic Resistance
- Obesity
- Digestive disorders / IBS
- Autoimmune diseases
- Cancer - specifically cancer reoccurrence
- Neurodegenerative diseases / **dementia**

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Isolation • Loneliness • Depression Among Cancer Patients



Loneliness and depression are prevalent (>30%) in cancer patients, causing poor Q-o-L and shortened lifespan.

J Psychosoc Oncol. 2012 Jan;30(1):1-20.
Afr Health Sci. 2011 Sep;11(3):341-5. J Affect Disord. 2012 Feb 4. Progress in Neuro-Psychopharmacology and Biological Psychiatry Volume 31, Issue 6, 15 August 2007, Pages 1242–1247. 31

Psychological state can affect the outcome of disease.

Depression as well as anxiety and cancer commonly occur together
The prevalence of depression and anxiety amongst cancer patients increases with disease severity and symptoms such as pain and fatigue.



Biological Psychiatry, Volume 54, Issue 3, 1 August 2003, Pages 269–282

Depression and anxiety in cancer patients

- Depressive symptoms are common in patients with cancer – according to a recent study 38%
- Clinicians working in cancer services have recognized that depression is often undiagnosed and untreated and that these shortcomings in care can have substantial effects on patients' quality of life.
- Perhaps, one of the most effective and overlooked treatment for the prevention of cancer, and even more so, is the prevention of cancer reoccurrence and metastasis, is targeting the Vital Spirit with botanical medicine together with stress and behavior modification.

Br J Psychiatry 2004; 184: 386–392; Br J Psychiatry 2004; 184: 386–392; Lancet 2000; 356(9238): 1326–1327; Br J Cancer 2004; 90(2): 314–320; Br J Cancer 2001; 84(8): 1011–1015; BMJ Support Palliat Care. 2015 Feb 9.

Anxiety Predicts Myocardial Infarction in Men

Recent research reported that chronic anxiety can significantly increase the risk of a heart attack. The findings add another trait to a growing list of psychological profiles linked to heart disease, including **anger, depression, pessimism, and anxiety.**
(*J Am Coll Cardiol.*2008; 51:113-119, 1/7/2008)



20 pooled studies on nearly 250,000 people (average follow-up period of 11 years) found that anxiety was associated with a 26% increased risk of coronary heart disease and a 48% increased risk of heart-related death over the follow-up period, after adjusting for known heart disease risk factors. (June 29, 2010, *J of the Am. Coll of Cardiol.*)³⁴

Link between Emotions and Heart Disease (HD)

- An analysis of findings from 44 studies¹ presents strong evidence that; there is a clear link between anxiety and depression and adverse outcomes in HD.²
- To be specific, anger and hostility are significantly associated with more heart problems in initially healthy people, as well as a worse outcome for patients already diagnosed with heart disease.
- **Anger** relates to excess liver fire (HEAT), which is associated with blood thickening, vascular constriction, increases SNS and heart damage.

Journal of the American College of Cardiology, Vol. 53, No. 11, 2009; Heart Lung. 2011 Sep-Oct; 40(5): 393–404

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Chronic Stress, Anxiety and Insulin /Anabolic Resistance

- Stress includes trauma, acute illness, surgery, chemotherapy, working night-shifts, or sleep deprivation; as well as the environment. (EDC)
- The most notable and intriguing may be that relative sleep deprivation can cause insulin resistance and cancer.

**Sleep deprivation = IR = Oxidative stress/Inflammation
= Cancer/Heart disease**

J Pediatr Endocrinol Metab. 2012;25(7-8):617-8., Sleep Med Clin. 2007 June; 2(2): 251–261. Sleep Med Rev. 2008 Aug;12(4):289-98, Public Health. 2008 Dec;122(12):1373-81, Sleep Breath. 2013 Feb 1.

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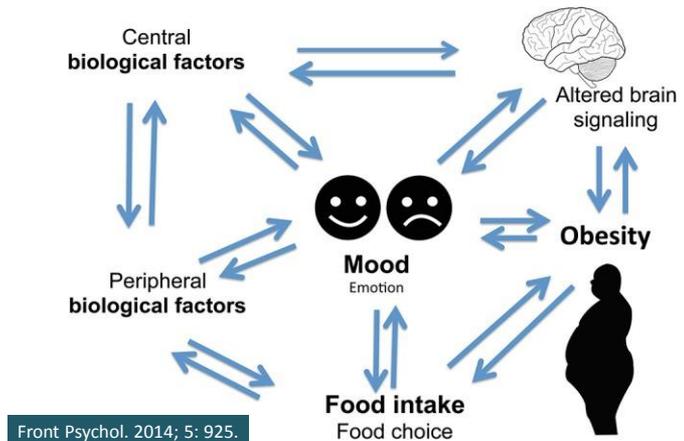
Stress and Anxiety Influences the Balance of Intestinal Microflora

- “The composition of the gut flora was not significantly affected by drastic changes in diet, but statistically significant shifts in the proportions of some species were noted in individuals under conditions of anger or fear stress.”
- IBS involves alterations at the nervous and endocrine systems that alter the gut microflora, and cause an increase in intestinal permeability and intestinal inflammation.
- You must address the nervous system to therapeutically improve digestive disorders.

Moore WE, Cato EP, Holdeman LV. Some current concepts in intestinal bacteriology. *Am J Clin Nutr* 1978;31:S33-S42., Huis in 't Veld JH. Gastrointestinal flora and health in man and animal; *Tijdschr Diergeneeskd* 1991;116:232- 239. *World J Gastroenterol*. 2012 Feb 21;18(7):616-26.

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Complex Two-way Relationship Linking Food Intake, Mood, and Obesity



Front Psychol. 2014; 5: 925.

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Stress Comes in Different Kinds

1. There is the positive kind called **EUSTRESS**, which is short term stress and actually arises to strengthen us for immediate action, creativity, and times when we need inspiration and motivation.
2. **DISTRESS** is negative and harmful and causes us to adapt to changing situations; there is the short-term variety of acute stress that passes quickly, and long-term chronic stress.
3. **HYPERSTRESS** is when we get so stressed out that we just overload because it is just too much for us to handle.
4. **HYPOSTRESS** means just not enough stress. *We need a little bit of stress in our lives, otherwise we feel bored and have nothing challenging us.

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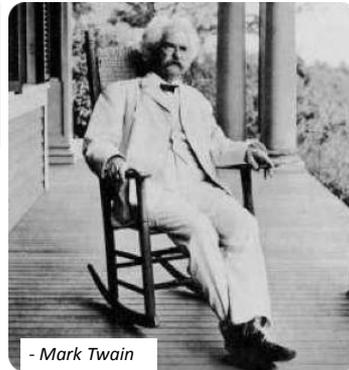


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Real Stress or Perception?

"I'm an old man now, and I have known a great many problems in my life... most of which never happened."

"Courage is resistance to fear, mastery of fear, not absence of fear."



- Mark Twain

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Homeostasis vs. Allostasis

- **Homeostasis** implies that an organism **remains within a certain range** of physiological parameters to maintain stable function.
- **Allostasis** implies that an organism **constantly varies** and **adjusts** physiological parameters to maintain stable function.

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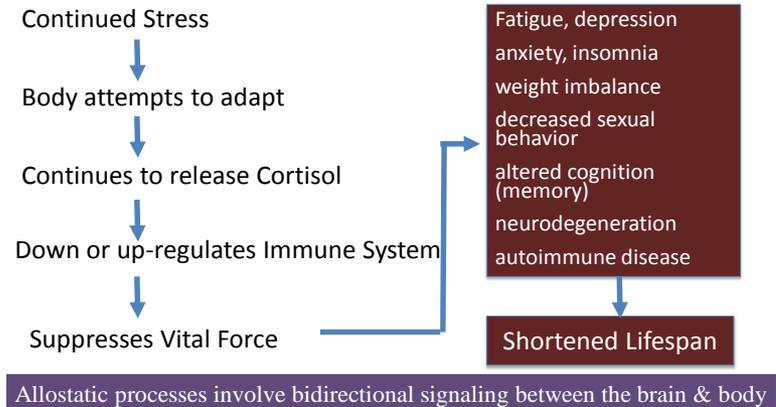
Allostatic Load

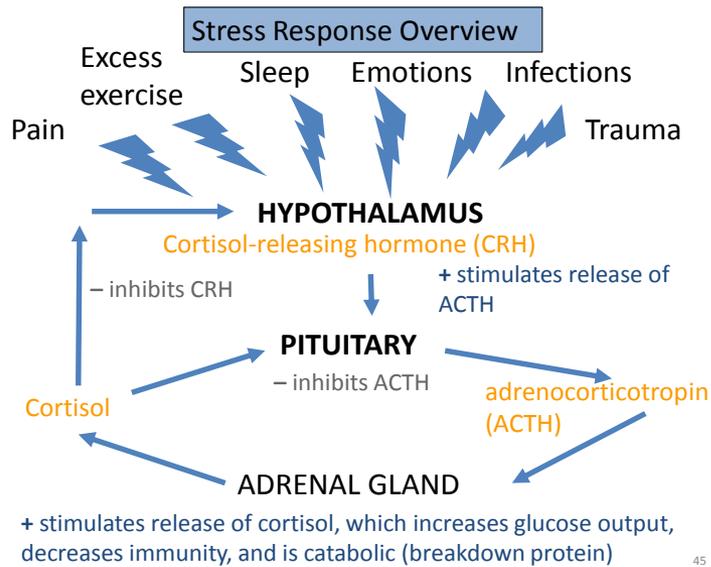
- Prolonged neurochemical imbalance has negative consequences (pathology in extreme cases) for normal neural function. This is called the "**allostatic load**" – What the cost to the brain and body is of continual allostatic response (neuronal cell atrophy). (read *Why Zebras don't get Ulcers*)
- Alldynamic processes can be adaptive in the short-term and **maladaptive** in the long-term.

Maladaptive is characterized by a kind of behavior that allows an individual to change an unconstructive or disruptive behavior to something more constructive Such as avoiding situations because you have unrealistic fears may initially reduce your anxiety, but it is non-productive in alleviating the actual problem in the long-term.

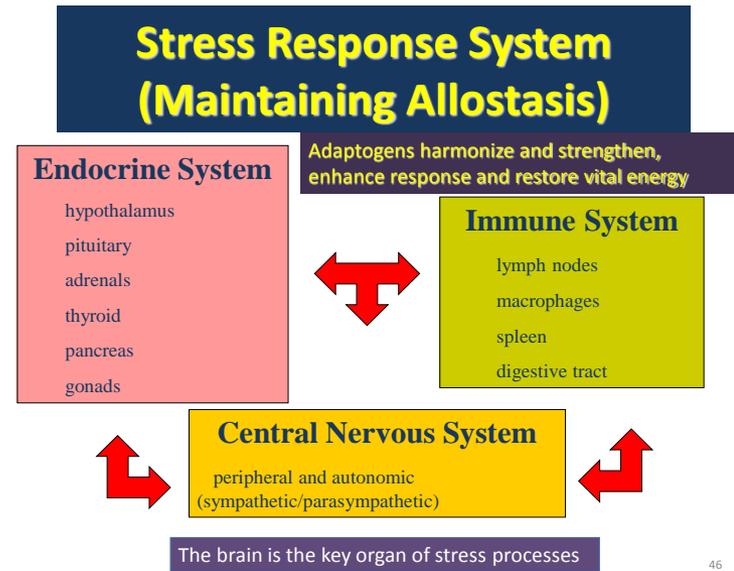


Stress Response System (Allostatic Overload)





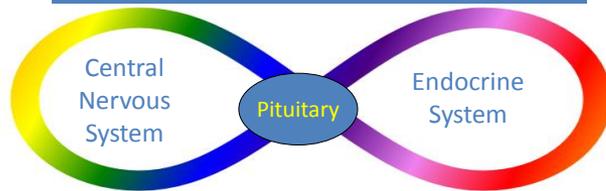
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The Hypothalamus “Bridge”

A key function of the hypothalamus is to link the nervous system to the endocrine system via the pituitary gland.



Botanical Nervines, combined with specific Amino acids, B-vitamins

Adaptogens, combined with specific Amino acids, B-vitamins

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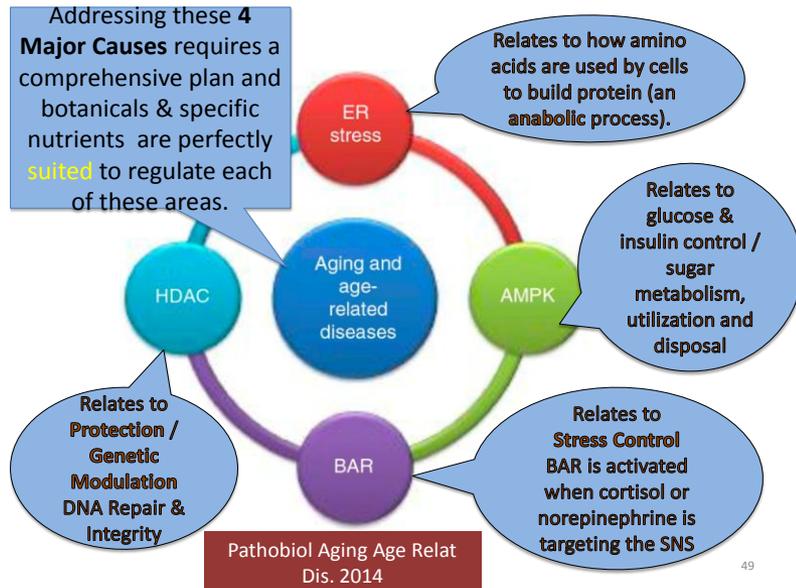
The Quality Control Theory (QCT) of Aging and Age Related Diseases

- 1) inadequate protein processing in a distressed endoplasmic reticulum (ER);
- 2) histone deacetylase (HDAC) processing of genomic histones and gene silencing;
- 3) suppressed AMPK (adenosine monophosphate kinase) nutrient sensing with inefficient energy utilization and excessive fat accumulation; and
- 4) beta-adrenergic receptor (BAR) signaling and environmental and emotional stress.

Reprogramming these systems to maintain efficiency would be a rational strategy for increasing lifespan and improving health.

Pathobiol Aging Age Relat Dis. 2014; 4: 10.3402/pba.v4.24835.

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The Life Force: Spirit, Mind & Body



- Vitality: the energetic & material cohesiveness in a living body – **“The Innate Conductor”**
- Spirit and the eyes
- Governing energy that maintains balance
- Directive force that can shift energy and maintain balance as situations arise
- John Lloyd wrote the succinct motto that was adopted by the Eclectic physicians:
“Sustain the vital force.”



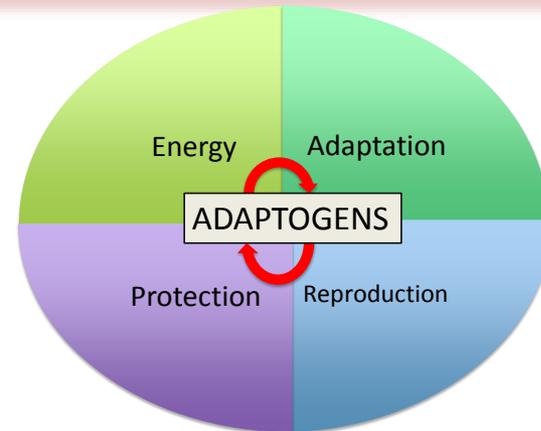
The most effective therapeutic change is one that assesses and supports the individual’s innate capacity to heal

VIS CONSERVATRIX

- This (Vis conservatrix) capacity was described as vitality, vital powers, life force and conservative power.
- Their motto was "*Sustain the Life force.*"
- The inherent power in the organism to resist the effects of stress/illness measured by the efficiency to carry out **the 4 R's**)recognize/response/recovery/rejuvenate; and to build the four **Life Requirements**

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THE FOUR LIFE REQUIREMENTS



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ETMS Three Energetic Influences

Three “Vital Energies” within the Human Being

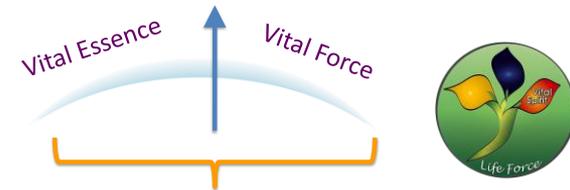


- **Vital Force** – Efficiency of digestive system & lungs to create energy, blood & tissue
- **Vital Essence** – Balance & nourishment of endocrine/hormonal & system
- **Vital Spirit** – Strength & connection of spiritual energy within & throughout

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Vital Spirit

Rising **Vital Spirit** = Pilgrimage of Life



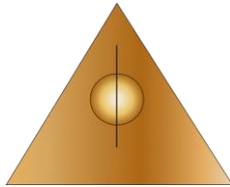
Constantly in flux: energy in -- energy out
With aging, they decrease and **Vital Spirit** encompasses more of our being

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Vital Spirit (continued)

Spiritual Heaven (Pure Love)

"Let go of the rest to bring heaven to Earth"

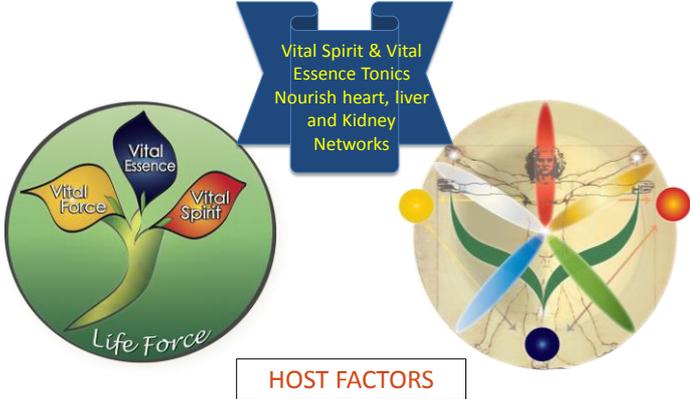


Physical ——— Earth ——— Mental

With aging, we lose Vital Essence and Vital Force, but our Vital Spirit increases. It is the pilgrimage of life.

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HEART • LIVER & INWARD KIDNEY ESSENCE



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At the Heart of The Matter

Promotes CV Health

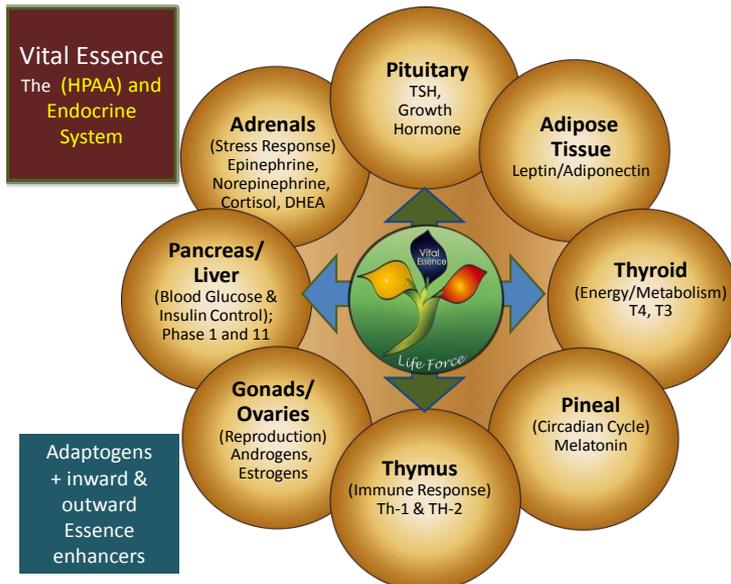
- *Optimism*
- *Kindness*
- *Patience*
- *Forgiveness*
- *Laughter-Joy*
- *Community/Family*
- *Love*



Contributes to CVD

- *Pessimism/Depression*
- *Anger/Anxiety*
- *Impatient/Frustration*
- *Resentment*
- *Weepy-Sadness*
- *Isolation/Loneliness*
- *Hate*

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Botanicals for the Vital Essence (KEN)

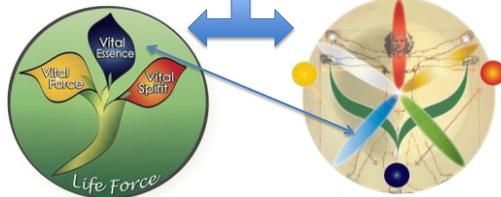
Inward (Yin)

Shativera
 Rehmannia
 Eucommia
 Fenugreek
 Vitex
 Royal Jelly



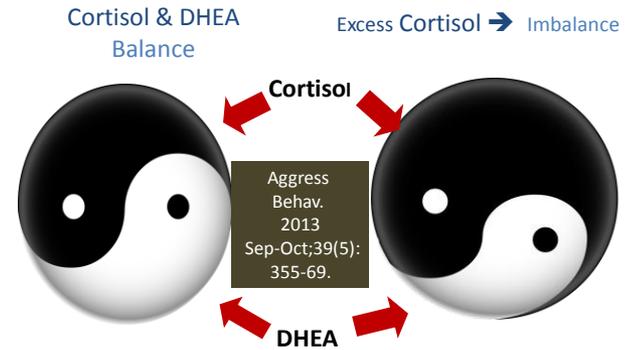
Outward (yang)

Epimedium
 Rhaponticum c.
 Mucuna p.
 Tribulus t.
 Cordyceps
 Eurycoma longifolia
 jack



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Vital Responses to Health – Yin/Yang Balance



Hormonal and neuropsychological impairment
 Both excess and/or deficiencies are equally as bad

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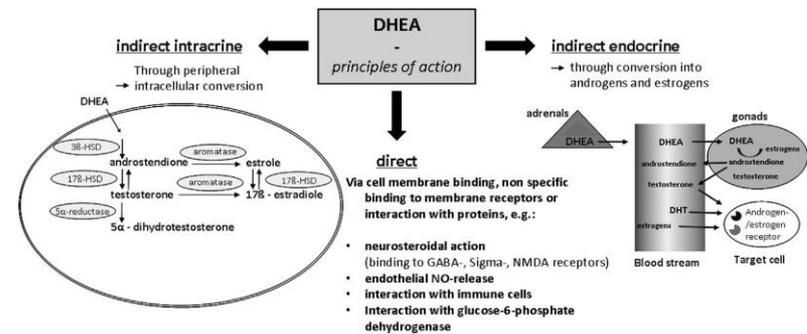
DHEA and Adrenal Insufficiency

- In patients with adrenal insufficiency (AI), secretion of DHEA is impaired, leading to decreased circulating DHEA and DHEAS levels, and to androgen deficiency in women.
- Replacement of DHEA in patients with adrenal insufficiency positively influence mood, sexuality and subjective health status.
- A double-blinded, placebo-controlled study by involving 24 women with AI showed that DHEA (25 or 50 mg per day over 4 months) significantly improved both, well-being and sexuality
- In another randomized placebo-controlled double-blinded study comprising 39 patients, an improvement of mood and fatigue upon DHEA substitution (50 mg DHEA per day over 12 weeks)

Best Pract Res Clin Endocrinol Metab. 2015 Jan;29(1):25-32.

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The Many Actions of DHEA



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Important Blood Tests

- Hormone panel including TES, ER, DHEAS, Thyroid hormones (free and reverse T-3), etc.
- Vitamin D (25OH & di125OH)
- Homocysteine (MTHFR SNPs)
- Inflammatory and catabolic biomarkers



Low testosterone levels can cause clinical depression in older men, Hypothyroidism, you may have symptoms of fatigue, trouble concentrating, and sleeping too much and feelings of depression.

Shores, M. *Archives of General Psychiatry*, February 2004; vol 61: pp 162-167;
<http://articles.mercola.com/sites/articles/archive/2014/06/19/mental-illness-hypothyroidism.aspx>

Low Levels of Vitamin D and Depression Go Hand in Hand

- A recent study including about 12,600 people aged 20 – 90 showed people with the lowest blood levels of vitamin D were more likely to report symptoms of depression, compared to people with higher blood levels of vitamin D. This relationship was strongest among people with a history of depression.

Hoang, MT. *Mayo Clinic Proceedings*, 2012, in press. Robert Graham, MD, internist, Lenox Hill Hospital, New York City. E. Sherwood Brown, MD, PhD, professor of psychiatry, University of Texas Southwestern Medical Center, Dallas, Texas.

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Vitamin D and Depression



- Inverse relationship between Vitamin D and several mood disorders
 - Low serum 25(OH)D is associated with depression
- Goal of serum 25(OH) vitamin D level is > 50 <80 ng/ml
- Supplementation (2000-5000iu/day) is likely necessary.

Gynecol Endocrinol. 2014 Nov 4;1-4; Nutrients. 2014 Oct 28;6(11):4720-30; Aust N Z J Psychiatry. 2014 May;48(5):464-71; J Womens Health (Larchmt). 2014 Jul;23(7):588-95. J Intern Med. 2008;264(6):599-609 ⁶⁵

Light Therapy for Seasonal and Nonseasonal Depression

- Seasonal affective disorder (SAD) is a type of depression that typically occurs each year during fall and winter.
- *“Provides a compatible adjunct to antidepressant medication, which can result in accelerated improvement and fewer residual symptoms.”*
- Light boxes, available from stores and Internet retailers, come in different shapes and sizes and have varied features.

CNS Spectr. 2005;10(8):647-663;
<http://www.mayoclinic.org/diseases-conditions/seasonal-affective-disorder/in-depth/seasonal-affective-disorder-treatment/art-20048298?pg=2&p=1> ⁶⁶

Part 1: Closing Remarks

ETMS applies 'Critical Thinking'

Actively and skillfully conceptualizing, applying, analyzing, synthesizing, and/or evaluating information gathered from, or generated by, observation, experience, reflection, reasoning, or communication, as a guide to belief and action.

Art/Creativity • Science/Rationale • Experiential Knowing

Natural and Supernatural healing coexisting together

Musical (Mind & Spirit working in harmony)

"If I were not a physicist, I would probably be a musician. I often think in Music. I live my daydreams in music. I see my life in terms of music. ... I get most joy in life out of music." Albert Einstein