

Stress-Quick-Summary

*“When you sit to dine with a ruler, note well what is before you, and put a knife to your throat if you are given to gluttony. Do not crave his **DELICACIES**, for that food is deceptive.”*

Proverbs 23:1-3 NIV

Definition Delicacy: something delightful or pleasing, especially a choice food considered with regard to its rarity, costliness

This proverb has multiple meanings one applies to the food we choose to eat. We in the western world eat like KINGS with a lot of delicacies. Numerous of these foods taste very good, pleasing to our taste buds, but through experience and science we’re finding out how bad sweet (carbs) foods can be to our long term health.

Anytime I spend time studying the construction and design of the human body, I am extremely amazed at God’s Masterpiece. With the scientific tools God has given us he has enable us to see only glimpses of this fantastic complex and well-designed being.

Remember in Genesis it say “Let us make mankind **in our image**....So God created mankind **in his own image, in the image of God** he created them; male and female he created them.” God created us in HIS image!!!

Description of God's Design for Our Body's to Handle Stress

1. Amygdala (a – mig – du – la) takes in what you see and sounds (part of the Brain)
2. Brain interprets danger or not
3. These signals go to the hypothalamus (Command Center)
 - a. Command center communicates with the AUTONOMIC (automatic) nervous system.
 - i. This center controls INVOLUNTARY body functions
 1. Breathing
 2. Blood pressure
 3. Heartbeat
 4. Opens or closes down key blood vessels
 5. Opens or closes down small airways in the lungs
 - b. Autonomic nervous system can be in one of two modes. These two modes automatically controlling the same bodily functions.
 - i. **Sympathetic - Step on the gas (DANGER...DANGER)**
 1. **1st RESPONSE** - FIGHT or FLIGHT response
 - a. Uses adrenal glands o pump hormones (adrenaline) into blood results in;
 - i. Heart beating faster
 1. Pushing blood to muscles and other vital organs
 2. Pulse rate & blood pressure go up
 - ii. Breathing faster – small airway in lung OPEN wide
 1. So oxygen can get in blood quicker
 2. Extra oxygen needed throughout body to fuel response
 3. Mind get very alert
 4. Sight, hearing and other senses become sharper
 - iii. Body makes blood sugar from temporary stored fats
 2. **2nd REPSONSE** – HPA Axis (Hypothalamic-Pituitary-Adrenal) response
 - a. When 1st surge of hormones settles down – if NEEDED
 - i. Hypothalamus kicks in second response
 - ii. Like stepping on “Gas Pedal” again keeping SYMPATHETIC nervous active
 - iii. If brain see still see threat...
 1. Starts another round of different hormones from the adrenal glands
 - a. Flooding CORTISOL into blood
 - b. Cortisol inhibits insulin form shutting glucose into cells – helps FIGHT or FLIGHT!!!
 - c. Consequently body stays ramped up
 - iv. When threat passes CORTISOL levels drop - PARASYMPATHETIC
 - 1.
 - ii. **Parasympathetic - Step on the brake (LET'S RELAX)**
 1. REST and DIGEST response
 2. This system puts the brakes on all the parts of the body the SYMPATHETIC system ramped up
 - c. Think of CRUISE control in your car – it automatically maintains a constant speed whether going up or down hills. --- That is the autonomic system controlling thing in your body OR think of a thermostat in your house.....

Can we Control this Automatic System?

1. Techniques to counter chronic stress
 - a. Prayer - **RELAXATION**
 - b. **EXERCISE**
 - c. God's behavior with us is the best example we have for selfless love. – We can imitate this selfless love in our relationship, both friend and enemy. Let's call this **SOCIALIZING**
 - d. **ADEQUATE SLEEP**
2. IMMEDIATE CONTROL
 - a. **We can't control what happens to us but....**
 - b. **WE HAVE CONTROL OVER HOW WE REACT TO IT**
3. Jesus tells us to love our enemies, why?
 - a. Our enemies set our sympathetic nervous system in motion.....
 - b. By loving our enemies we imitate God's love and this also settles down our own sympathetic nervous system down preventing going into chronic stress, not good for us or those around us
4. Jesus taught us to pray, why?
 - a. Pray **CONNECTS** with God, "I am the vine you are the branches"...we are connected to God, without this connection we are spiritually and physically dead
 - b. How do we connect, in prayer, sharing his grace in word and deed
 - i. Our Father who is in heaven, holy be your name....**Praising God**
 - ii. Your kingdom come on earth as in heaven....**acknowledge God's will and the fact he is spreading his kingdom on earth**
 - iii. Given us this day our daily bread....**asking for what we need**
 - iv. **Forgive us our failings** as we forgive those who fail or mess us up.....*most excellent example....we are to forgive friend and foe alike, both irritating to us when they fail us*
 - v. Lead us not into temptation *but* deliver us from evil....**we need God's direction and protection**
 - vi. This prayer has all we need....It has the power to turn on the PARASYMPATHETIC nervous system
 - c. What is God looking for from us in our relationship with him...
 - i. "You do not delight in sacrifice, or I would bring it; you do not take pleasure in burnt offerings. My sacrifice, O God, **is a broken spirit; a broken and contrite heart** you, God, will not despise." Psalms 51:16-17 NIV
 - ii. "He has shown you, O mortal, what is good. And what does the Lord require of you? To **act justly and to love mercy** and to **walk humbly with your God.**" Micah 6:8 NIV
 - d. God knows us and how your bodies are designed/made so loving and forgiving our neighbor is a very important part of the human design.

Can we train our brains with God's help to turn to God in prayer under stress?

1. Dr. Leaf⁽¹⁾ is a Christian communication pathologist and cognitive neuroscientist with Masters & PhD in Communication Pathology and a BSc Logaopedics (study of syllables)
 - a. Mind-Brain connection
 - i. What is the difference between brain, mind and soul body
 - ii. Brain is physical and the mind bridges the body and soul
 - b. You can use your mind to change and grow your brain
 - c. Neuroplasticity makes this possible

⁽¹⁾ Dr. Leaf has worked with 1000's of underprivileged teachers/students (South Africa & USA)

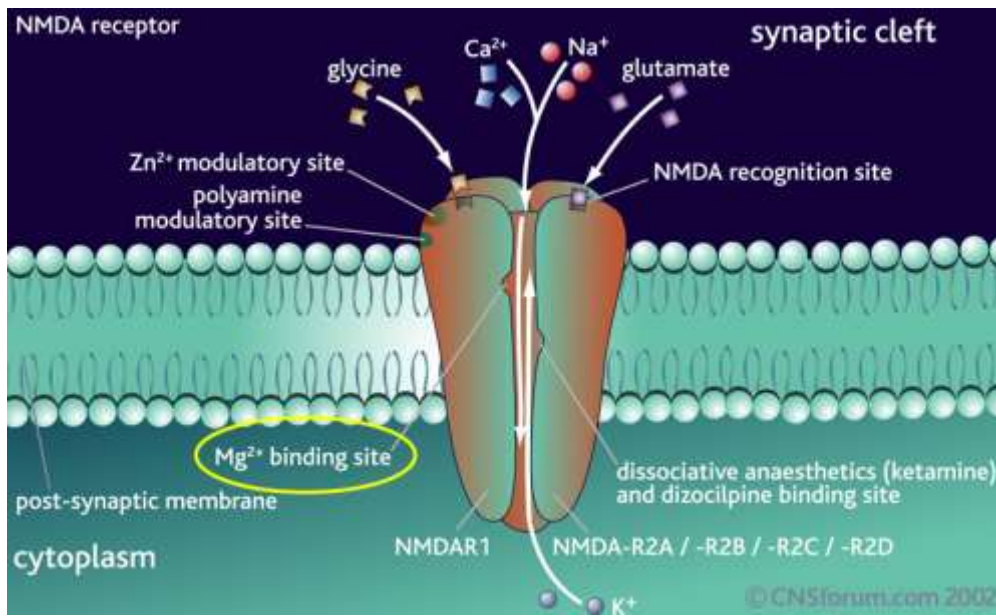
She has developed her theory (called the Geodesic Information Processing theory) on how we think, build memory, and learn, into tools and processes. She has transformed thousands of individuals with Traumatic Brain Injury (TBI), Chronic Traumatic Encephalopathy (CTE), Learning disabilities (ADD, ADHD), Autism, Dementias and Mental ill-health issues like anxiety and depression.

Importance of Magnesium (mag) Related to Stress

1. **We have approximately 25 g mag in our bodies**

2. **Measurement of mag**

- a. Traditional – blood serum mag
 - i. 50% to 60% present in the bones
 - ii. Most of the rest in soft tissues
 - iii. Less than 1% of total mag is in blood serum
 1. Body has very tight controls blood mag levels – PULLING mag from soft tissue
- b. More recent – Red blood cell magnesium



3. **How magnesium helps to control stress**

- a. The NMDA receptor contains a specialized site within the receptor to which Magnesium can bind. When Magnesium binds to this site, it blocks the receptor, which prevents the receptor from activating. This protects the brain from the negative effects of over activation of the NMDA receptor.

Why supplementing with Mag? - Stress levels very high in fast moving world & Poor food quality

Magnesium Requirement, mg/day

1. RDA
 - a. 350 - males
 - b. 300 - females
 - c. Less for kids
2. More recent studies and from Functional Medicine Practitioners
 - i. Dr. Seelig - For athletes
 1. Mag supplementing to help replace lost mag from exertion, sweating and stress
 - a. 2.7 to 4.5 mg/lb/day
 - b. For 150 lb man would need 400 to 675 mg/day
 - ii. Other say dose to achieve RBC mag level of 6 to 6.5 – this dose can be higher than Dr. Seelig's recommendations – that is because of the everybody has a different "mag burn rate"
 - iii. "Mag burn Rate" varies based quantity of your exposure to these items;
 1. Physical: intense exertion, manual labor, lack of sleep, travel
 2. Chemical: drugs, alcohol, caffeine, nicotine and environmental pollutants such as cleaning chemicals or pesticides
 3. Mental: perfectionism, worry, anxiety, long work hours
 4. Emotional: anger, guilt, loneliness, sadness, fear
 5. Nutritional: food allergies, vitamin and mineral deficiency
 6. Traumatic: injuries or burns, surgery, illness, infections, extreme temperatures
 7. Psycho-spiritual: troubled relationships, financial or career pressures, challenges with life goals, spiritual alignment, happiness