DEALING WITH ANXIETY & Depression

Victory over Anxiety & Depression

- Doesn’t occur just by asking God
- We must:
  - Participate and Act
  - Make intentional choices
  - Work at redirecting our minds and behavior
- We are all unique:
  - Brain wiring, environments, & experiences
- We must not compare nor judge

COMMON SIGNS OF ANXIETY

- Feeling nervous, restless or tense
- Having a sense of impending danger, panic or doom
- Having an increased heart rate
- Breathing rapidly (hyperventilation)
- Sweating
- Trembling
- Feeling weak or tired
- Trouble concentrating or thinking about anything other than the present worry
- Having trouble sleeping
- Experiencing gastrointestinal (GI) problems
- Having difficulty controlling worry
- Having the urge to avoid things that trigger anxiety

Anxiety is a response to a stressful or perceived threatening situation that MAY occur instead of one that is already occurring. In other words, anxiety is a reaction to emotions instead of danger in the environment.

TYPES OF ANXIETY

Generalized

Panic

Phobias (Specific Phobias)

Agoraphobia

Social Anxiety

Separation Anxiety

Selective Mutism

- Persistent and excessive worry - worries on big areas such as family health, money, relationships, but also on minor matters such as everyday things like job responsibilities, appointments, chores, and daily events.
- Interferes with daily activities
- Restlessness
- Feeling on edge or easily fatigued,
- Difficulty concentrating,
- Muscle tension
- Problems sleeping

TYPES OF ANXIETY

Generalized

Panic

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Selective Mutism

- Overwhelming combination of physical and psychological distress
- Palpitations, pounding heart or rapid heart rate
- Sweating, trembling, numbness, tingling, and/or shaking
- Feeling of short of breath, smothered, choked
- Chest pain, hot flashes, chills
- Feeling dizzy, light-headed or faint
- Nausea or abdominal pains
- Feeling detached
- Fear of losing control and/or dying

TYPES OF ANXIETY

Generalized

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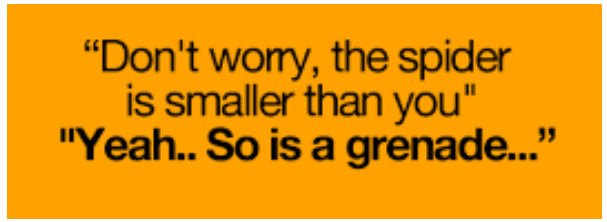
Selective Mutism

- Excessive and persistent fear of a specific object, situation or activity that is generally not harmful.
- Individual knows the fear is excessive, but they can't overcome it.
- Avoid the object/situation/activity at all cost
- Relatable Situations:
  - Flying
  - Spiders



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- Agoraphobia is the fear of being in situations where:
  - Escape may be difficult or embarrassing
  - Help might not be available in the event of panic symptoms.
- Typical Coping strategies:
  - Actively avoid the situation
  - Requires a companion
  - Endures with intense fear or anxiety.
  - Will not leave the house
- Diagnosis occurs when the fear is ***intensely*** upsetting to the point it significantly interferes with normal daily activities

TYPES OF ANXIETY

Generalized

Panic

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Social Anxiety

Separation Anxiety

Selective Mutism

- Significant anxiety and discomfort about being **embarrassed**, **humiliated**, **rejected** or **looked down on** in social interactions.
- People with this disorder will try to avoid the situation or endure it with great anxiety.
- The fear or anxiety causes problems with daily functioning and lasts at least six months.
- Common examples are extreme fear of public speaking, meeting new people or eating/drinking in public.

TYPES OF ANXIETY

Generalized

Panic

Phobias (Specific Phobias)

Agoraphobia

Social Anxiety

Separation Anxiety

- Excessive fear or anxiety about separation from those with whom one is attached.
- Beyond what is *appropriate* for the person's age, persists (at least four weeks in children and six months in adults)
- Causes problems functioning and in daily life.
- A person with separation anxiety disorder may be persistently worried about losing the person closest to him or her, may be reluctant or refuse to go out or sleep away from home or without that person, or may experience nightmares about separation.
- Physical symptoms of distress often develop in childhood, but symptoms can carry though adulthood.

ANXIETY AS A PUZZLE PIECE

Posttraumatic Stress Disorder

Obsessive-Compulsive Disorder

- Clinically significant distress
- Exposure to actual or threatened death, serious injury, or sexual violation
- Presence of nine or more of symptoms related to intrusion, negative mood, dissociation, avoidance, and arousal beginning or worsening after the traumatic event(s) occurred

ANXIETY AS A PUZZLE PIECE

Posttraumatic Stress Disorder

Obsessive-Compulsive Disorder

- Obsessions: recurrent and persistent thoughts, impulses, or images that cause distressing emotions such as anxiety, fear or disgust.
- Repetitive behaviors to reduce the thoughts.
- Compulsions are repetitive rituals, behaviors, or actions that you engage in to either get rid of the thought or reduce the anxiety around the thought.
- Compulsions may be
  - Physical (like washing your hands or counting your steps)
  - Mental (like thinking positive thoughts or praying).

Central Nervous System

Main highway for sending messages to the body

Job of CNS:

- Organize and analyzes info from sensory organs.
- Issues orders to the body from reflexes to intentional movement

Impact on Mental Health:

- Uses information from the Parasympathetic Nervous System (PNS) and Sympathetic (SNS) keep us safe and healthy.
- PNS slows our heart and breathing rates, promotes digestion, and lowers blood pressure.
    - The more we are in the PNS state, the healthier we are, BUT we don't need to stay there all the time.
- SNS responses to danger or stress– activates your alarms and speeds up your heart, delivers more blood to areas of your body that need more oxygen, and other responses to help you get out of danger (fight or flea)

***We need to fluctuate between the SNS and PNS: They have opposite roles: SNS sends alarms and PNS signals to relax. The two work together to keep you body in balance and adjusting well.

We need to have some Anxiety!

We need to go through anxiety, face reality and stress, We can't turn on the PSNS if we avoid the stressor. By facing and doing it, we strengthen our ability to deal with stress.

But may the God of all grace, who called us to His eternal glory by Christ Jesus, after you have suffered a while, perfect, establish, strengthen, and settle *you.* (1 Peter 5:8-9)

Calming the CNS: Activate the PSNS

We can trigger the PSNS, which calms and strengthens the vagal tone by: anything that makes us feel safe, supported, confident and secure:

Meditating on Scripture (God's promises and who He is)

Prayer/Praise

Positive human touch (hugs)

Going to our safe place (a perceived place of safety)

Visualizing a safe place–picturing the Lord's hand holding mine, beach, etc.

Some ways to stimulate your PSNS: laughter, breathing, do a fake yawn. Humming, singing, chanting, gargling , vocal cord vibration stimulates the vagus nerve. Hum a tune---a hymn. Chewing gum opens jaws and stimulates salvia, sour candy--all can trigger that parasympathetic response. Shake it off—animals shake after a stressful event—dance, shake, big body movement---activates the parasympathetic response. Exercise. You have to move up the latter. Tense and relax—it activates the brain to turn on the relaxing state.

"Thinking about Thinking"
Higher Reasoning
Executive Function

Prefrontal Cortex

9 Functions of the Prefrontal Cortex

1. Empathy
2. Insight
3. Response Flexibility
4. Emotion Regulation
5. Body Regulation
6. Morality
7. Intuition
8. Attuned Communication
9. Fear Modulation

Limbic Brain

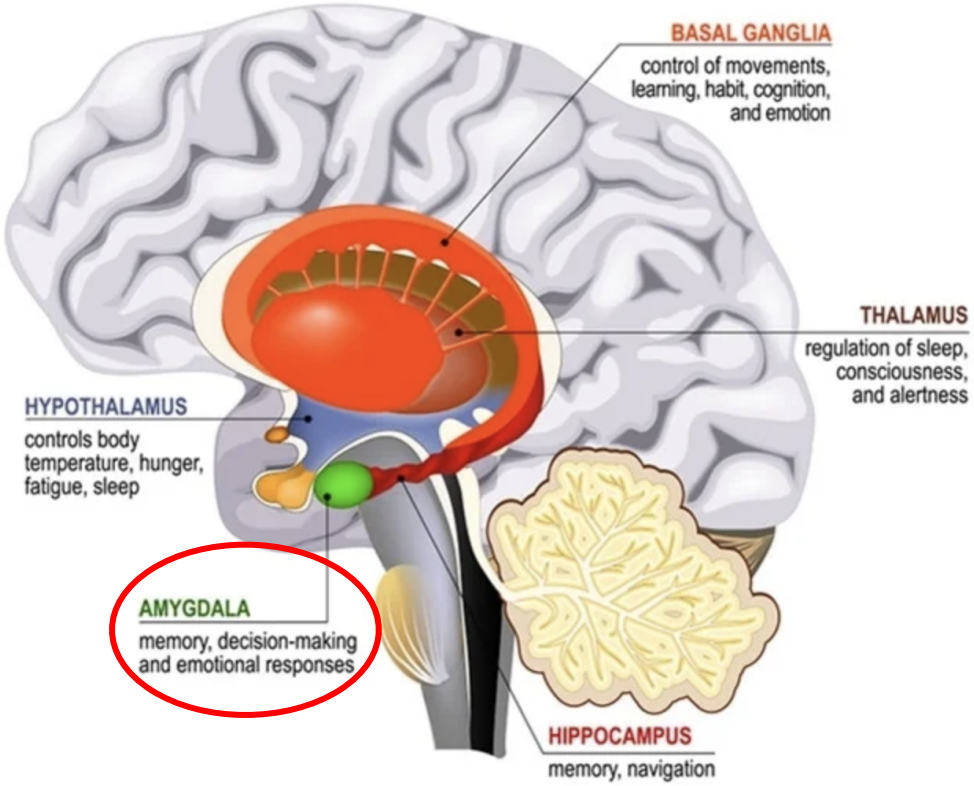
1. Fight, flight, freeze stress response
2. Thinks, "Am I safe? Do people want me?"
3. Emotions live here

BRAIN STUCTURES

Symptoms of anxiety disorders are thought to result in part from disruption in the balance of activity in the emotional centers of the brain which we will explore.

Amygdala

- Fear Receptor
- Begins to develop in utero and is fully functioning at six months gestation
- Triggers an unconscious fight/flight/freeze mechanism in response to real or perceived threat (triggered by the brain stem)
- Important in the processing and regulation of emotions
- Home of implicit memories (unconscious)
- Takes in information through the 5 senses



Bottom-up emotion generation

Bottom-up generation elicits activity from the Amygdala. The amygdala is elicited suddenly when faced with a stimulus that is inherently biologically based emotionally, – like when you glance over to see a spider crawling on your shoulder.

There are differences in people in terms of how sensitive and how reactive their Amygdala. This variation among humans in biologically determined sensitivity and strength of the emotional response is influenced not just by DNA but by the effects of trauma.

We will find that whenever bottom-up anxiety is being triggered by the amygdala (like those being triggered by trauma) we need to first use approaches to calm the system like deep breathing, centering, etc. before we can use cognitive approaches.

“Upstairs Brain” = Thinking Brain

- *Prefrontal Cortex* – Command & Control Center
- Executive Functions —to– Reflective
- **High Road**– goes straight to Prefrontal Cortex (watchtower) –offering a view from on high

“Downstairs Brain” = Feeling Brain

- *Amygdala* – Emotional Alarm Center
- Reactive
- Threat Detection and Protection
- **Low Road**– activates the amygdala (smoke detector) which triggers the release of cortisol and adrenaline – Fight/Flight/Freeze

Depression

- While we all experience depressed mood at times, major depression or clinical depression is a common, but serious mood disorder that affects how a person feels, thinks, and handles daily activities. Symptoms are there most of the time for at least 2 weeks that interfere with daily activities.

- Depression is more complex than simply having too much or too little of certain brain chemicals. There are many possible causes of depression, including faulty mood regulation by the brain, genetic vulnerability, and stressful life events. It's believed that several of these forces interact to bring on depression.

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Clinical Depression

Depressed mood most of the day and a loss of interest in normal activities and relationships -- symptoms that are present every day for at least 2 weeks. According to the *DSM-5* -- a manual used to diagnose mental health conditions -- you may have other symptoms with major depression. Those symptoms might include:

- Fatigue or loss of energy almost every day
- Feelings of worthlessness or guilt almost every day
- Impaired concentration, indecisiveness
- Insomnia or hypersomnia (excessive sleeping) almost every day
- Markedly diminished interest or pleasure in almost all activities nearly every day
- Restlessness or feeling slowed down
- Recurring thoughts of death or suicide
- Significant weight loss or gain (a change of more than 5% of body weight in a month)

Other Types of Depression

1. Persistent Depressive Disorder (also called dysthymia or dysthymic disorder) has less severe symptoms of depression that last much longer, usually at least 2 years.
2. Perinatal depression-occurs during pregnancy or after childbirth. When it begins during pregnancy its called prenatal and when it occurs after childbirth, its postpartum depression
3. Seasonal Affective Disorder is depression that comes and goes with seasons, with symptoms usually starting in late fall or early winter and going away in spring or summer.
4. Depression with symptoms of psychosis is a severe form of depression in which a person experiences psychosis symptoms such as delusions or hallucinations.

TREATMENT

Depression can be treated and the earlier treatment begins, the more effective it is. Depression is usually treated with psychotherapy, medication, or a combination of the two.

Psychotherapy, which is counseling, can help people by teaching them new ways of thinking and behaving and helping them change habits that contribute to depression. Research called evidence-based has shown cognitive-behavioral therapy (CBT) and interpersonal therapy (IPT) to be effective.

Medications: Antidepressants are medications used to treat depression that work by changing how the brain produces or uses certain chemicals involved in mood or stress. You may need to try several ones before finding the one that improves your symptoms. They usually take 4 to 8 weeks to work, with problems with sleep, appetite, and concentration often improving before the mood lifts.

TREATMENT CONT.

Things you can do that also help:

Exercise

Regular bedtime

Eat healthy

Connect with other people—healthy Christians

Avoid alcohol, nicotine, or drugs not prescribed for you

******* Seek the Lord, Feed on His Word and FOLLOW IT, worship, and Encourage yourself in the Lord.**

Clinical Depression and Brain Changes

Clinical Depression may physically change your brain. Researchers think genetics, stress, and inflammation may play a role. There is growing evidence that several parts of the brain shrink in people with depression and these areas lose gray matter volume. Gray matter is tissues with a lot of brain cells. People who have regular or ongoing clinical depression that is severe seem to have more gray matter volume loss. There is evidence that the hippocampus (which is connected to parts that control emotion) and the prefrontal cortex (involved in thinking and planning) get smaller in people with clinical

Brain Inflammation
Researchers aren't sure if depression or inflammation comes first, but studies show that certain proteins linked to brain inflammation are at higher levels in people who have a major depressive episode and are even higher in people who've had untreated major depressive disorder for 10 years or longer.
Uncontrolled brain inflammation can:

- Hurt or kill brain cells.
-
- Prevent new brain cells from growing
- Cause thinking problems
- Speed up brain agingScientists are still trying to answer that question. Ongoing depression likely causes long-term changes to the brain, especially in the hippocampus. That might be why depression is so hard to treat in some people. But researchers also found less gray matter volume in people who were diagnosed with lifelong major depressive disorder but hadn't had depression in years.

(**10 The thief does not come except to steal, and to kill, and to destroy. I have come that they may have life, and that they may have *it* more abundantly. (John 10:10)**

- There is research evidence that antidepressants (which work on the chemicals in your brain that control stress and emotions) can help your brain form new connections and lower inflammation.

- Research evidence also indicates that Cognitive behavior therapy (CBT) promotes neuroplasticity, which means that by changing the way you think, you change your brain in ways that help your depression.

****Cognitive Behavior Therapy based on the Word of God, takes its effectiveness to a whole New and Divine Level of Power!

4 For the weapons of our warfare *are* not carnal but mighty in God for pulling down strongholds, **5 casting down arguments and every high thing that exalts itself against the knowledge of God, bringing every thought into captivity to the obedience of Christ, (2 Corinthians 10: 4,5)**

Depression and Brain Changes

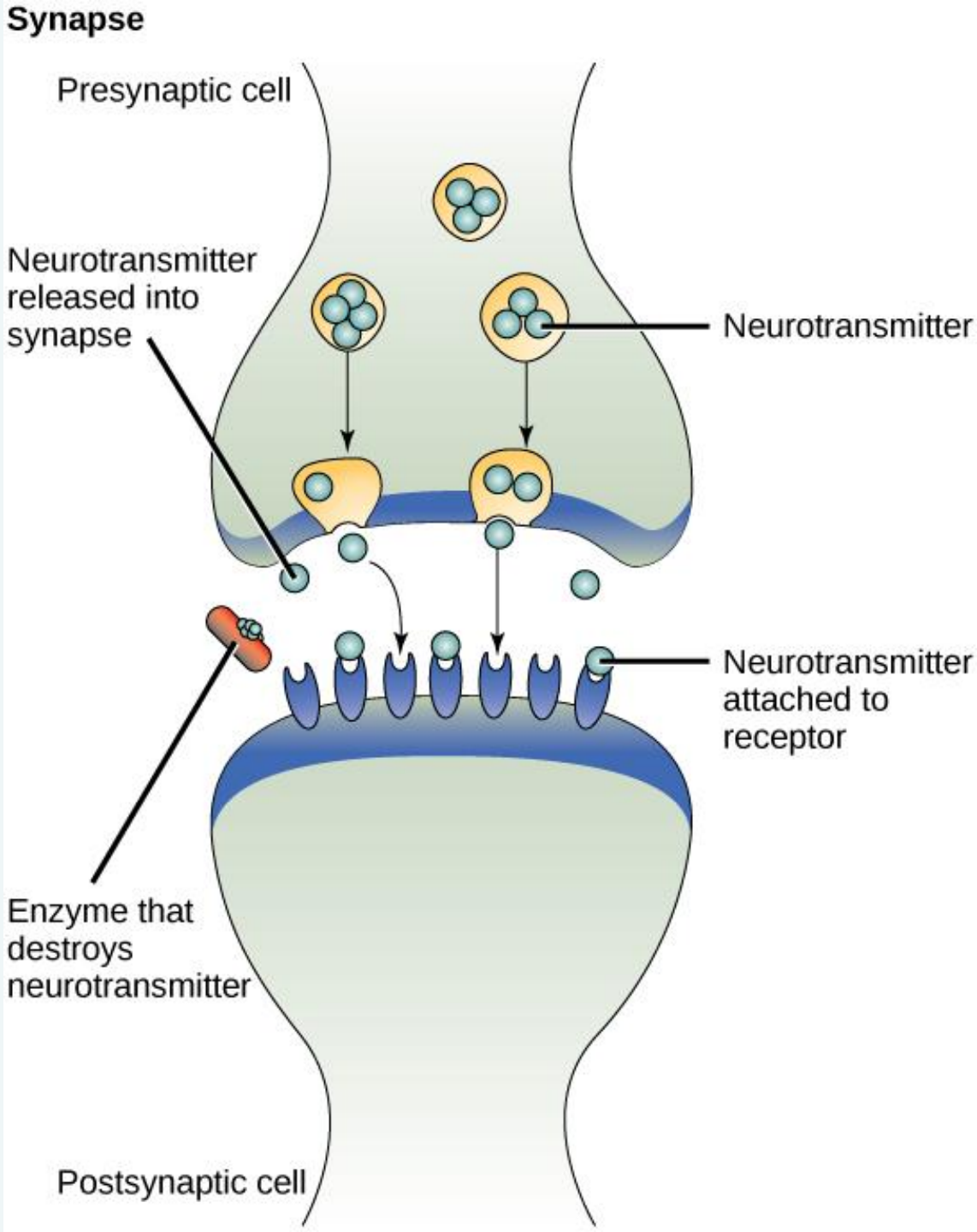
When these areas (hippocampus, prefrontal cortex, and amygdala) don’t work the right way, you might have:

- Memory problems
- Trouble thinking clearly
- Guilt or hopelessness
- No motivation
- Sleep or appetite problems
- Anxiety
- Over reactivity to negative emotions.

Anxiety & Depression and Neurotransmitters

NEUROTRANSMITTERS

- Chemical messengers that carry messages from one nerve cell (neuron) in your brain to the next.
- The neurotransmitters are like a key that can only work in its partner lock.
- Synapse: fluid-filled space between each nerve cell. *Neurotransmitters must carry their message across this space (synapse) and then land on and bind to specific receptors on the next cell.*
- Neurotransmitters that mediate anxiety: Norepinephrine, serotonin, dopamine, and gamma-aminobutyric acid (GABA).
- Major neurotransmitters in Depression: serotonin, norepinephrine or dopamine



DOPAMINE

- Associated with pleasure and reward
- The “feel-good chemical”
- Dopamine Release:
- The euphoric feeling when you engage in a rewarding (*healthy or unhealthy)* behavior.
- Healthy Choices:
  - Drives motivation, pursue goals, engage in activities that bring happiness
- Unhealthy Choices:
  - Choosing activities that bring harm such as drugs or risky thrill-seeking activities

INCREASING DOPAMINE NATURALLY

- Eat a diet that's high in magnesium and tyrosine-rich foods.
- Tyrosine is an amino acid. It's absorbed in your body and then goes to your brain, where it's converted into dopamine.
- Foods known to increase dopamine include:
  - chicken, almonds, apples, avocados, bananas, beets, chocolate, green leafy vegetables, green tea, lima beans, oatmeal, oranges, peas, sesame and pumpkin seeds, tomatoes, turmeric, watermelon and wheat germ.

INCREASING DOPAMINE NATURALLY

Physically

- Engage in activities that make you happy or feel relaxed. This is thought to increase dopamine levels. Some examples include exercise, meditation, yoga, massage, playing with a pet, walking in nature or reading a book.

Supplements

- Tyrosine. Tyrosine is a natural amino acid and a precursor to dopamine. (Dopamine is made from tyrosine.)
- L-theanine. L-theanine is another precursor to dopamine.
- Vitamin D, B5 and B6. These vitamins are needed to make dopamine.
- Omega-3 essential fatty acids.
- Magnesium.

SEROTONIN

- Serotonin controls mood, social behavior, sleep, appetite, and body functions like digestion, wound healing, bone health, blood clotting, sexual desire, and thus seems gets much of researchers' attention.
- Serotonin levels that are too low or too high can cause physical and psychological health problems.

INCREASING SEROTONIN NATURALLY
SUN, SUPPLEMENT, STRESS, & SAVOR

SUN

SUPPLEMENT

STRESS

SAVOR

Get in the sun!

- Try to get **10** to **15** minutes of sunlight each day to boost not only serotonin levels but vitamin D levels too.
- If you live in an area where you can't get natural sunlight, consider using light therapy to get that needed daily sunlight.

INCREASING SEROTONIN NATURALLY
SUN, SUPPLEMENT, STRESS, & SAVOR

SUN

SUPPLEMENT

STRESS

SAVOR

- Dietary supplement
  - Tryptophan
  - Probiotics
  - SAMe.
- Herbal supplements:
  - Ginseng
  - St. John's wort
  - Syrian rue
  - Nutmeg.

INCREASING SEROTONIN NATURALLY
SUN, SUPPLEMENT, STRESS, & SAVOR

SUN

SUPPLEMENT

STRESS

SAVOR

Getting more exercise & lowering your stress level!

- Regular exercise is known to increase serotonin levels.
- Aerobic:
  - Thirty minutes-five times a week plus two strength-training sessions per week can improve mood disorders and heart health.
- Mental/Physical Exercise:
  - Cleaning and Organizing to decrease stress.

INCREASING SEROTONIN NATURALLY
SUN, SUPPLEMENT, STRESS, & SAVOR

SUN

SUPPLEMENT

STRESS

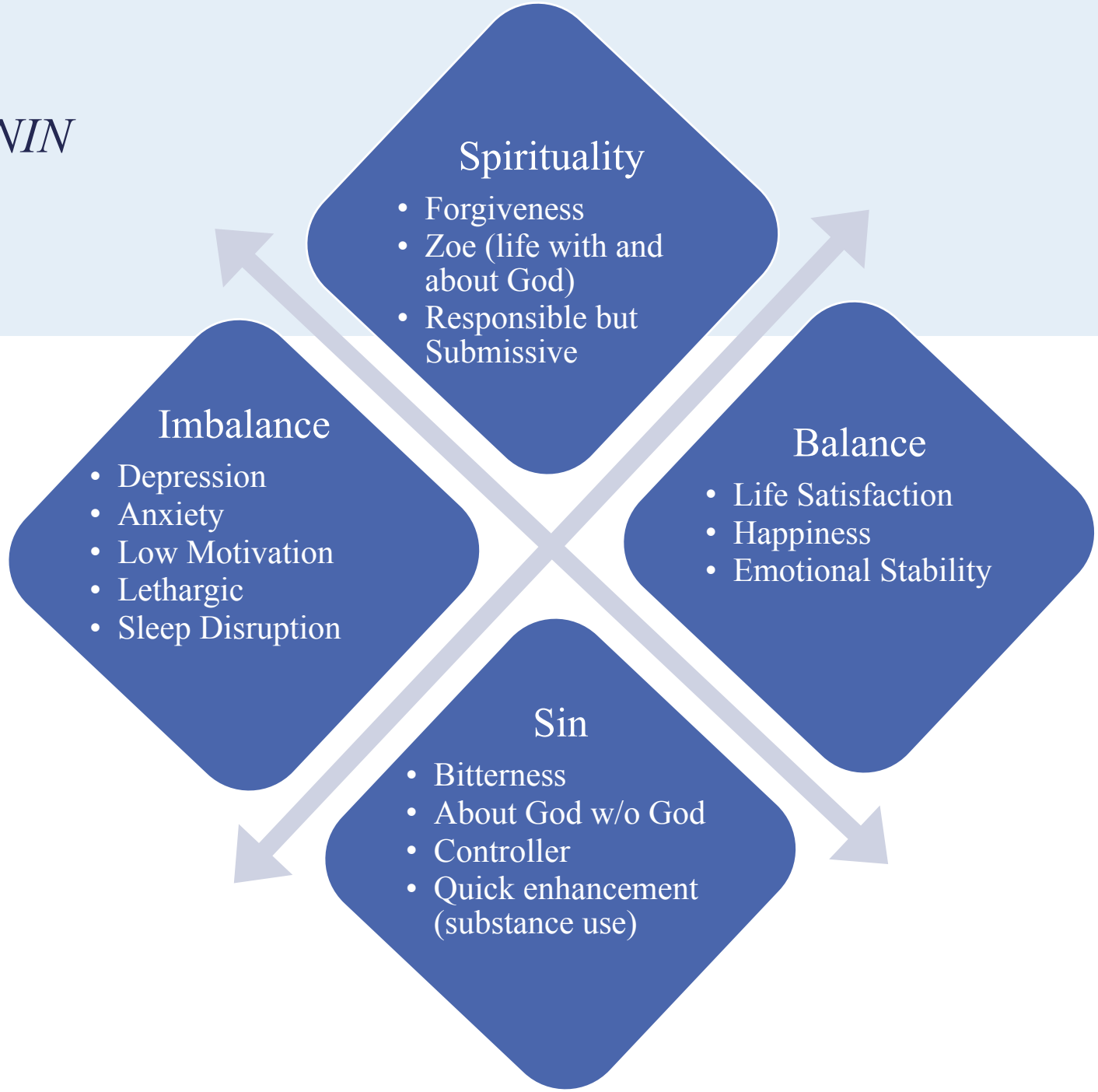
SAVOR

Savor the Serotonin!

- 95% of our serotonin is produced by the gut!
- Many foods naturally contain tryptophan, the amino acid from which serotonin is made. You can try increasing your serotonin level by eating tryptophan-containing foods, such as:
  - Salmon
  - Eggs
  - Cheese
  - Turkey
  - Tofu
  - Pineapples
  - Nuts, oats and seeds
- Will not boost on its own
  - Carbohydrates Releases insulin Absorbs amino acids Create serotonin

DOPAMINE + SEROTONIN

SPIRITUALITY
DOPAMINE + SEROTONIN



NOREPINEPHRINE
AKA "NORADRENALINE"

- Both a hormone and a brain neurotransmitter.
- Primarily in the sympathetic nervous system
- Some trace amount in the adrenal tissue (*which lay on top of your kidneys)*.
- The adrenal glands release it to give the body sudden energy in times of stress, referred to as the "*fight or flight response*".
- **Job of norepinephrine:**
  - Passes nerve impulses from one neuron to the next and helps mobilize the brain for action, can improve energy and attentiveness.
- Too much norepinephrine can make you anxious and too little brings on symptoms of depression.

GAMMA AMINOBUTYRIC ACID (GABA) & GLUTAMATE

Gamma aminobutyric acid (GABA)

- Slows down your brain and central nervous symptoms
  - Known to have a calming effect.
- It is the most common inhibitory neurotransmitter in your central nervous system and it lessens the ability of a nerve cell to receive, create, or send chemical messages to other nerve cells.
  - We can have too high or too low levels of GABA. GABA plays a major role in controlling anxiety, stress, and fear.

Glutamate

- Most abundant excitatory neurotransmitter in the brain
- Necessary for proper brain functioning.
- It can also be too high or too low.
- Excitatory neurotransmitters are chemical messengers that excite, or stimulate, a nerve cell, making it able to receive critical information.
- Ironically, Glutamate is also necessary for making (GABA).

GAMMA AMINOBUTYRIC ACID (GABA) & GLUTAMATE

Too Much

GABA	Distracted Agitation Memory issues Sleepiness	**Glutamate**	Anxiety Muscle tightness Headache Heartbeat (irregular or palpitations) Increased pain sensitivity

Just Right

Balance **Confidence** **Resilience** **Regulated Body**

Too Little

GABA	Tired Irritable Trouble falling asleep Restlessness	**Glutamate**	Restless Mind OCD Anxiety Increased worry Overwhelmed	Distracted

GAMMA AMINOBUTYRIC ACID (GABA) & GLUTAMATE

Gamma aminobutyric acid (GABA)

Available as a supplement

*Some if not most may not be able to be processed by your brain**

Drinks: present in some fermented foods and green and black tea.

Foods: brown rice, mushrooms, tomatoes, spinach, broccoli, cabbage, cauliflower, brussels sprouts, sprouted grains and sweet potatoes

Glutamate

No supplement available

Diet and lifestyle will enhance body's ability to produce glutamate.

Foods: *tea (green, black, and oolong), berries, tomatoes, potatoes, noni fruit, lentils, wild-caught fish, and grass-fed beef, kimchi, sauerkraut, unsweetened kefir, and coconut water kefir*

Vitamin B6-rich foods: *salmon, lean chicken, tofu, potatoes, bananas, avocados, spinach, garlic, broccoli and Brussels sprouts*

Probiotics *(Lactobacillus rhamnosus, Lactobacillus paracasei, Lactobacillus brevis, and Lactococcus lactis)*

Additional Supplements to help: *valerian, lemon balm, passionflower, l-theanine, magnesium, taurine*

GABA & GLUTAMATE
Actions-Activity To Increase

- Meditation
  - Calming activity
  - It's no wonder that research suggests that meditation is linked to GABA production, as well as greater emotional regulation.
  - Ingest the Word of God + Meditate & embrace the Lord's promises = boost GABA!
- Exercise
  - Researchers have found that Glutamate or GABA levels increased in the participants who exercised. The effects lasted even after stopping the exercise, which shows promise for longer-lasting glutamate level changes with exercise.
  - Research involving other neurotransmitter systems has been fruitful in elucidating their function in anxiety but thus far has failed to produce new treatments.

NUTRITIONAL PSYCHIATRY

- A natural approach that centers on the use of food and supplements to help manage mental health conditions.
- It is often used as part of a complete treatment program that can include psychotherapy.

NATURAL FOODS

Fatty Fish

- Salmon, tuna, herring, and sardines are high in omega-3 fatty acids, which have been found to calm anxiety.

Asparagus

- High in potassium, fiber, the trace element chromium, and vitamins (A, C, E, and K), asparagus has strong anti-anxiety properties.

Avocados

- Rich, buttery avocados are high in B vitamins, which are involved in the production of the neurotransmitters serotonin and dopamine, which influence mood. In some people, B vitamin deficiencies have been associated with an uptick in anxiety. Avocados are also rich in brain healthy fats that may also protect against anxiety.

FERMENTED FOOD

Probiotics	Research involved 34 clinical trials.
	Anxiolytic effect on anxiety.
Eggs	Contain an amino acid called tryptophan which is involved in the production of serotonin.
Pumpkin Seeds	Anti-anxiety nutrients, including magnesium, B vitamins, and zinc.
Dark Chocolate (min 70% Cacao)	Raw and unsalted Decreases perceived stress
	Contains the neurotransmitter phenylethylamine, which is involved in regulating moods and releasing feel-good endorphins in the brain
Chamomile Tea	Helps promote sleep
	Significantly reduced moderate to severe symptoms of generalized anxiety disorder

TREATMENT

ABC MODEL OF ANXIETY

Emotional reactivity, core beliefs, and coping strategies interact.

A **Alarms** are emotional sensations or physiological reactions to an event or thought.

B The decision of how to act in response to the alarm is made based on **beliefs** that stem from previous experiences, information that is perceived by the sensory organs, and our personal background.

C The individual engages in **coping** strategies or behaviors associated with the beliefs.

A mnemonic to use in explaining these circuits: A (Alarm, Amygdala), B (Beliefs, Basal ganglia) and C (Coping, cortex)

Using the ABC model of anxiety: Every anxiety disorder is an interplay of anxious feelings, activated by the **Amygdala** that sends **alarms**, abnormal processing of information which comes from faulty **Beliefs** stored by the **Basal Ganglia**, and inadequate **Coping** strategies processed and chosen by the **Cortex.**

COGNITIVE BEHAVIORAL THERAPY

Focused on thoughts & behaviors

People come in because:

- Process fear-inducing information in excessive detail. Doing so causes them to get overwhelmed and hinders them from evaluating it properly.
- They tend to cope by separating the information into “good” and “bad” with no gray area in between. This leads them to think of the worst-case scenario (catastrophizing) and then they act in ways to protect themselves against what they perceive as danger.
- For many, this will lead to avoiding whatever they fear, and this negates the brain from learning that it doesn’t have to activate fear responses when faced with the situation again.
- If the person doesn’t avoid and instead faces the feared situation, they survive and get past it, and this trains the brain to readjust and recognize the situation as safe and thus it stops activating the alarms and accompanying anxiety.

People are taught:

1. Recognize what is going on
2. Challenge unhealthy beliefs
3. Replace coping behaviors with ones that are a) healthy and B) do not avoid whatever is thought to be feared.

ABC Model of Depression

Thoughts affect our behavior and feelings.

A: Activating event or antecedent-situations you are dealing with.

B: Beliefs (your beliefs about the event

C: Consequences (your emotional and behavioral response to the event based on your beliefs)

Cognitive Behavioral Therapy for Depression

Cognitive behavioral therapy (CBT) is one of the most evidence-based psychological interventions for the treatment of Depression

- CBT focusses on maladaptive thinking and negative appraisal of the life events that lead to the development of dysfunctional cognitive reactions. This cognitive dysfunction is in turn is responsible for the rest of the symptoms in affective and behavioral domains.

- Treatment identifies the unhealthy thinking and redirects it to healthy and rational thoughts and promotes healthy behaviors such as socializing, exercise, and purposeful activity.

BELIEFS

- Our beliefs are based on experiences from our past that have been validated repeatedly over the years by similar new experiences.
- Beliefs are typically interpretations of the facts.
- ***Fact*** versus ***Interpretation***
- Most often we live out of our interpretations as if they were the facts. This is where we get into trouble.
- Living in a fallen world, under the sway of the enemy, we will all have been subjected to hurt and to experiences that make us vulnerable to deception. The more wounded we are, the more the enemy can distort our perceptions and interpretations and in so doing provoke anxiety and fear, which can lead to more distorted perceptions.
- We can have beliefs that set us up for anxiety, fear, and depression. That's why the Lord told us to take every thought captive to the pulling down of strongholds. Beliefs that fuel a spirit of fear and depression are some of the most destructive strongholds of all.

For the weapons of our warfare are not carnal but mighty in God for pulling down strongholds, casting down arguments and every high thing that exalts itself against the knowledge of God, bringing every thought into captivity to the obedience of Christ (2 Corinthians 10:4-5)

COPING STRATEGIES

- Coping strategies can be considered adaptive or maladaptive. These processes evolve over time, forming a complex picture of a particular anxiety disorder.
- Cognitive behavioral therapy (CBT) is a type of psychotherapy that has been demonstrated to be effective for both depression and anxiety. It likely has been the most researched therapy of all.
- Numerous research studies suggest that CBT leads to significant improvement in functioning and quality of life. In many studies, CBT has been demonstrated to be as effective as, or more effective than, other forms of psychological therapy or psychiatric medications.

<u>CBT is based on several core principles, including:</u>

- Psychological problems are based largely on faulty or unhelpful ways of thinking.
- Psychological problems are also based on learned patterns of unhelpful behavior.
- People suffering from psychological problems can learn better ways of coping with them, thereby relieving their symptoms and becoming more effective in their lives.

COPING STRATEGIES

Thinking Patterns

- Learning to recognize one's distortions in thinking that are creating problems, and then to reevaluate them in light of reality.
- Gaining a better understanding of the behavior and motivation of others.
- Using problem-solving skills to cope with difficult situations.
- Learning to gain confidence

Behavioral patterns:

- Facing one's fears instead of avoiding them.
- Learning to calm one's mind and relax one's body.

Become your own therapist

- Clients are helped to develop coping skills, whereby they can learn to change their own thinking, problematic emotions, and behavior.

CBT AND SCRIPTURE

- Cognitive therapy without the Word falls short of the victory God planned for us.
- When you line your thoughts with what God says, our true mental and emotional health is established.
- The challenge of life will be to base our thoughts, feelings, and actions on what the Word says.
- How effective we are in the war on our emotional and mental health will hinge on how committed we are in doing this.
- The Holy Spirit will always help us, but the Lord told us to renew our minds, to trust Him, to take those wrong thoughts captive, replacing them with truth.

Peace:

You will keep him in perfect peace, Whose mind is stayed on You, Because he trusts in You. (Isaiah 26:3)

Strength:

Commit your works to the Lord, And your thoughts will be established. Proverbs 16:3

Destructive:

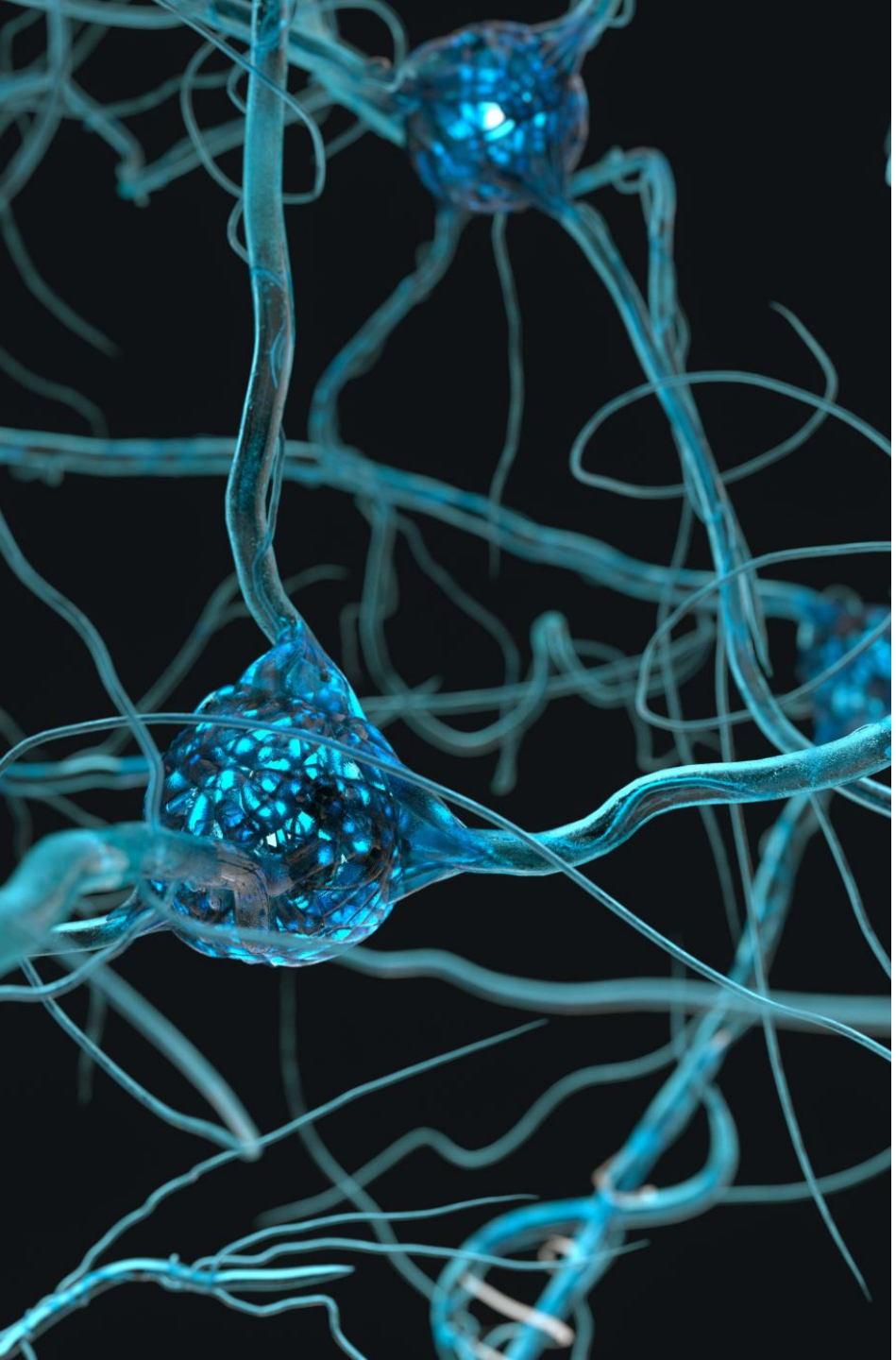
- I have stretched out My hands all day long to a rebellious people, Who walk in a way that is not good, According to their own thoughts; (Isaiah 65:2)

EMOTIONS AND SCRIPTURE

- Cognitive behavioral approaches are effective for reducing anxiety of **top-down** generated emotions, including depression and anxiety.
- How to do cognitive therapy/rewiring neural pathways

For the weapons of our warfare are not carnal but mighty in God for pulling down strongholds, casting down arguments and every high thing that exalts itself against the knowledge of God, bringing every thought into captivity to the obedience of Christ (2 Corinthians 10:4-5)

- When excessive anxiety has been generated from bottom-up, being activated from the amygdala, interventions such as exposure therapy and approaches to calm the CNS may best weaken the excessive anxiety.
- Exposure therapy is where therapists create a safe environment in which to "expose" clients to the things they fear and avoid.
- Diaphragmatic breathing—deep belly breathing whenever you're feeling stressed or nervous
- Heart rate variability (HRV) training—enhance your HRV to lower anxiety
- Supplements—GABA, l-theanine, and magnesium soothe anxiousness
- Calming diet—eat more anti-anxiety foods



NEUROPLASTICITY

Neuroplasticity is the brain's ability to reorganize itself by forming new neural pathways through life and in response to experiences.

Thoughts:

When many neurons fire together, they form a thought.

Neurons release brain chemicals (neurotransmitters), which generate electrical signals in neighboring neurons.

The electrical signals propagate like a wave to thousands of neurons, which leads to thought formation.

As the neurons fire and the way they connect individual neurons creates the network pathways. The 100 trillion synapses in the cortex form at a rate of about 10,000 every 15 minutes.

Together, all these synapses create a giant network and that gives us consciousness.

Focus:

When humans focus their attention enough, they can slowly rewire these pathways themselves.

Researchers emphasize that each thought affects your brain wiring.

This can be good or bad.

Changing Thoughts:

By practicing new ways of thinking, we can reshape our nerve cells and change the way our brains work.

Every time the brain processes new information, neurons fire, new pathways form, and the malleable brain alters its shape and structure.

Research shows if you treat your brain correctly, it can continue to grow.

CHANGING YOUR PATHWAYS

- Follow God's lead
- Where are you focused?
  - God's promises→ hope, joy, peace
  - On problems and worries→ increased stress and fear

- **Path of Least resistance:**
  - Most people live on autopilot most of the time. This is because our neural pathways operate under the law of least effort, or the path of least resistance
  - You can't always help what thoughts pop in your head, but you need to hold yourself accountable to reject those that need to be rejected.
  - The repetition of chronic emotional intensity of the stress response easily overrides weak attempts at positivity.

- **Be stubborn about the right pathways!!!**

EPIGENETICS

- Study of how your behaviors and environment can cause changes that affect the way your genes work.
- Psycho-social environmental interventions might be able to switch on and off genes, thus preventing or
- delaying the onset of disorders.
- Epigenetics research indicates that environmental factors may alter what genes get switched on or off.
- Thus, Dr. Koenig suggests that Christian counseling which promotes both human and divine nurturing may result in permanent genetic alterations that could affect not only the person's response to stress, but also transmit that to future generations. Thus, the more we pursue the Lord, the more we may help promote our own genetic alterations.

WHEN YOUR ANXIOUS

- Breathing: Often when people begin to experience anxiety, their breathing becomes shallow, rapid, and erratic. Since the brain is the most metabolically active organ in your body, any state that lowers oxygen will trigger more fear and panic.
- By taking slow, deep breaths you'll boost oxygen to your brain and start to regain control over how you feel.
- One way to practice deep breathing is by learning how to breathe from your diaphragm
- To practice breathing from your diaphragm, try this:
- Don't leave. Unless the situation is life-threatening, do not leave, run away from, or ignore whatever is causing you the anxiety. You must face the fear or concern directly, or it will always have control over you and increase your anxiety. If you are having a panic attack, allow yourself to feel the sensations and breathe through it.
- Change wrong thinking to right thinking. Identify your thoughts that are distorted and need to be challenged.

CHANGING YOUR BRAIN

- Make my top list of thoughts that fuel anxiety/fear or depression: These are depressive thoughts or fears that have deep grooves (strong neural pathways) in my brain. For each, Identify a powerful Bible verse that promises the opposite of the depressive or fearful thoughts.

- **Examples:**
  - Fear: I won't be able to pay my bills or get out of debt. Scripture:
  - Fear: I will get cancer, like my aunt died from. Scripture:
  - Fear: My husband won't get saved. Scripture
  - Depression: I am a failure and God is disgusted with me. Scripture:
  - Depression: My life is hopeless. Scripture:

CHANGING YOUR BRAIN

- What pathways bring you sadness, hopelessness, pain, distress, and harm? These need roadblocks that restrict your entrance.
    - Pathways of regret
    - Pathways of guilt
    - Pathways of fear
    - Pathways of doubt
    - Pathways of bitterness/unforgiveness

Emotionally connect to change pathways

*****A thought with no emotion attached to it has no real power to effectively engage your neural pathways. As we seek God and meditate on the Word, the more we allow the Holy Spirit to touch our emotions with the truth the, the more our intentional thinking and feelings carve the deepest grooves that will lead to more emotional and mental health. Our pathways lead to life, joy, and hope.**

1. **Feel** genuinely and emotionally connected to your intention to embrace with feelings of hope, trust, and positivity.

2. **Repetition and Practice: Neural pathways are strengthened into habits through the repetition and practice of thinking, feeling and acting.**

3. **Visualization** is almost as powerful as the real thing given your brain cannot tell the difference between something real or imagined. Research shows that anytime you are thinking, you are engaging and thus conditioning neural pathways. Consequently, whether you are reminiscing about the past, thinking about the present or anticipating the future you are strengthening the neural pathways associated with whatever you are thinking about. The most important part of using visualization to strengthen healthy habits is to engage your emotion. Emotion provides the fuel to enlist more neural power for creating powerful neural networks.

4. **Meditation----Acceptance**

Hope and Responsibility

When you meditate you slow down the nonsense and chatter of the busy mind and access the calm abiding wisdom of your spirit. Proverbs 20:5 Counsel in the heart of man is like deep water, But a man of understanding will draw it out. Meditation is relaxing the body and quieting the mind.

In order to tap into the benefits of neural plasticity you have to disengage the stress response and stimulate the relaxation response. When you are stressed your brain rigidly defers to the strongest neural pathways out of survival and the path of least resistance. Consequently, during stress you do not have access to newly formed neural networks because they have not been tried and proven yet.

****While the basic architecture of the human brain is set up early in childhood, learning and memory is possible because individual neurons retain the ability to change their signaling and synaptic connections throughout a person's life. KNOWING THIS SHOULD GIVE YOU GREAT HOPE AND ALSO A GREAT SENSE OF RESPONSIBILITY TO LET THE QUEST OF YOUR LIFE BE TO PURSUING MAKING YOUR THOUGHTS, ACTIONS, AND FEELINGS BASED ON THE WORD OF GOD.

Choose Wisely

****What pathways do you want to groove so deeply that if crisp sweet water were to flow, it would glide easily into them over all others? The more the water flows, the deeper the grooves become, until they form well established creeks and rivers that bring beauty, strength, and nourishment to your soul.

I want deep and lasting grooves that promote my complete TRUST OF GOD

I want deep and lasting grooves that promote my awesome FEAR (REVERENCE) of GOD.

I want deep and lasting grooves that promote my awareness and understanding of how the LORD LOVES

Making & Maintaining My Groovy Brain

***** Every thought you think and feeling you feel strengthens the circuitry in your brain known as your neural pathways. The pathways make deep grooves into your magnificent brain the more you choose them and fight any foe that tries to keep you from traveling them.**

*****The human brain is made up of an estimated 100 billion neurons making a total of 100 trillion neural connections. This is a lot of neural power for creating super highways that lead to peace, joy, and a life for which our Creator intended.**