

Having recognized from completing the tests in Dr. Daniel G. Amen's book called *Change Your Brain, Change Your Life* that I have several weak areas of brain activity, I have begun to take the actions he describes to improve my memory and reduce depression. I have also added supplements to my diet to improve my brain health. Following is a summary taken from the book with added notes from the PBS broadcast program of the same name.

## **CHANGE YOUR BRAIN, CHANGE YOUR LIFE**

**D**r. Amen and associates took over 40,000 functional brain scans using radioisotopes and SPECT imaging and determined how various things affect the performance of different portions of the brain. They discovered that a healthy brain will look complete, while a diseased brain will appear to have a number of openings or holes where brain activity is absent. The brains of smokers, alcoholics, drug addicts etc. all exhibit a number of openings. The brains of Alzheimer's patients have very large openings indicating loss of ability to function.

### **Foods that are good for the brain:**

1. Blueberries are the best
2. Avocados
3. Walnuts
4. Green tea
5. Fish oil

### **Bad for the brain:**

1. Too much caffeine
2. Alcohol
3. Inhaling fumes
4. Organic solvents

## **SEVEN PRINCIPLES OF BRAIN FUNCTION**

**1<sup>st</sup> principle** – The brain determines how you think, feel, act and get along with others  
Your personality, character and soul

**2<sup>nd</sup> Principle** – When the brain works right you work right, and when it is not working right you don't work right  
When your brain is healthy you are focused, happy, relaxed, loving and affectionate  
When your brain is not working right you are distracted, sad, anxious, angry, and not as affective

**3<sup>rd</sup> principle** – Brain is a most complicated element in the body  
If you don't take care of it you lose 85,000 brain connections a day

**4<sup>th</sup> principle** – The brain is very soft in a hard skull. The brain is soft like jello  
Brain injuries matter. Protect your brain

**5<sup>th</sup> principle** - Many things can hurt or help the brain

### **Things that hurt:**

- Drugs
- Head injuries are very bad
- Alcohol (take only one or two drinks a week) Drinkers have smaller brains
- Lack of exercise

- Not enough sleep – less than six hours a night decrease blood flow to the brain.
- Stress
- Smoking ages the brain and dehydrates it.
- Too much caffeine. Only one or two dehydrates the brain and reduces blood flow.
- Negative thinking reduces blood flow to the brain.

**Things that help:**

- New learning makes new connections
- Healthy diet
- Daily vitamins and fish oil
- Exercise
- Great sleep
- Social connections of family hobby, club
- Positive thinking especially gratitude. Your brain is more coordinated when you are grateful
- Meditation is amazing for brain function. It activates the most thoughtful part
- Regular sexual activity helps mood and pain relief. Having sex three times a week reduces heart and stroke problems by 50% and decreases pain by 50%

**6<sup>th</sup> principle** – One (size) does not fit everyone’s diagnosis. Depression is a symptom

Causes:

- Chemical imbalance
- Grief
- Chronic stress
- Financial losses
- Relationship problems
- Low thyroid

**7<sup>th</sup> principle** – You can change your brain and change your life

Only 90 out of 3000 brains are healthy

The number one cause of strokes is smoking

Drugs really damage the brain

**BRAIN PART FUNCTIONS**

**Pre frontal cortex** – Humans have 30%, chimps 14% (?) dogs 7% and cats 0%

Controls:

- Focus
- Forethought
- Judgment
- Empathy
- Impulse control
- Learning from mistakes

Problems cause:

- Short attention span
- Don’t learn from mistakes

- Act like cat that lacks impulse control
- Procrastination
- Bad judgment
- Not much empathy
- ADD – low activity version
- Weak conscience
- Low persistence
- Low energy depression
- Need to be upset in order to concentrate

Things that help:

- Develop and maintain clear focus (One page miracle)
- Focus on what you like a lot more than what you don't like
- Have meaning, purpose, stimulation, and excitement in your life
- Get organized; get help when you need it
- Consider brain - wave biofeedback training
- Try audiovisual stimulation
- Don't be another person's stimulant
- Consider prefrontal cortex stimulation
- Watch your prefrontal cortex nutrition
- Try Mozart for focus
- Write out goals in all aspects – relationship, money, physical, spiritual
- Exercise – intense aerobic
- High protein, low carbohydrate diet
- Fish oil

**Cingulate brain** - at front of brain

Controls:

- Brain's ability to shift gears
- To be flexible and go with the flow
- Sees options
- Idea to idea movement
- Error detection

Problems cause:

- If it works too hard serotonin gets too low
- Get stuck in thoughts, hurts, grudges
- Argumentative
- Fault finding
- Micro managers
- Rigid
- Appears selfish
- Inflexible

Things that help:

- Notice when you are stuck, distract yourself, and come back to the problem later
- Think through answers before automatically saying no
- Write options and solutions when you feel stuck
- Seek the counsel of others when you feel stuck
- Memorize and recite the serenity prayer when bothered by repetitive thoughts

- Don't try to convince someone else who is stuck: take a break and come back later
- Try making paradoxical requests
- Learn how to deal with oppositional children. Give them options or use reverse psychology (Baby powder is an aphrodisiac for women who say no to sex)
- Consider cingulated medications
- Try nutritional interventions
- Exercise boosts serotonin
- Best diet is high carbohydrate and low protein
- Carbohydrates boost serotonin
- Dark chocolate
- Take 5 http supplement

## **Limbic system**

Controls:

- Emotional brain
- Our bonding
- Processing pain, smell, sex and libido
- Drive us to love and work
- Our mood, happy or sad
- Cinnamon is an aphrodisiac for men

Problems cause:

- Sadness, Depression
- Negativity
- Automatic negative thoughts
- Thoughts lie a lot
- Isolation
- Less interest in things usually

Things that help:

- Exercise is critical at least 4 x a week (works better than drug Zoloft)
- Fish oil is low in depressed people. Countries where people who ate the most fish had lowest depression
- Write out negative thoughts and talk back to them – Ask is this true?
- Natural food supplements (One called Prolan (?) is good for carbohydrate cravings)

## **Deep Limbic System**

Functions:

- Sets the emotional tone of the mind
- Filters external events through internal states (creates emotional coloring)
- Tags events as internally important
- Stores highly charged emotional memories
- Modulate motivation
- Controls appetite and sleep cycles
- Promotes bonding
- Directly processes the sense of smell
- Modulates libido

Problems:

- Moodiness, irritability, clinical depression
- Increased negative thinking

- Negative perception of events
- Decreased motivation
- Flood of negative emotions
- Appetite and sleep problems
- Decreased or increased sexual responsiveness
- Social isolation

Things that help:

- Kill the ANTS (automatic negative thoughts)
- Kill the ANTS/ Feed your anteater
- Surround yourself with people who provide positive bonding
- Protect your children with limbic bonding
- Build people skills to enhance limbic bonds
- Recognize the importance of physical contact
- Surround yourself with great smells
- Build a library of wonderful memories
- Consider limbic medications
- Try physical exercise
- Watch your limbic nutrition

## **Basal Ganglia**

Controls:

- Integrates feeling and movement
- Shifts and soothes fine motor behaviors
- Suppresses unwanted motor behaviors
- Sets the body's idle speed or anxiety level
- Enhances motivation
- Mediates pleasure/ecstasy

Problems cause:

- Anxiety, nervousness
- Panic attacks
- Physical sensations of anxiety
- Tendency to predict the worst
- Conflict avoidance
- Tourette's syndrome/tics
- Muscle tension, soreness
- Tremors
- Fine motor problems
- Headaches
- Low/excessive motivation

Things that help:

- Kill the fortune telling ANTS (automatic negative thoughts)
- Use guided imagery
- Try diaphragmatic breathing
- Try meditation /self hypnosis
- Think about the "18/40/60" rule
  - (At 18 you worry about what people think of you
  - At 40 you don't give a damn what people think of you
  - At 60 you realize that nobody's been thinking of you)
- Learn how to deal with conflict
- Consider basal ganglia medications

- Watch your basal ganglia nutrition

## **The temporal lobes**

Controls:

### **Dominant side (usually the left)**

- Understanding and processing language
- Intermediate-term memory
- Long term memory
- Auditory learning
- Retrieval of words
- Complex memories
- Visual and auditory processing
- Emotional stability

### **Non dominant side (usually the right)**

- Recognizing facial expressions
- Decoding vocal intonation
- Rhythm
- Music
- Visual learning

## **Problems with the dominant (Usually left) Temporal Lobe**

- Aggression, internally or externally directed
- Dark or violent thoughts
- Sensitivity to slights; mild paranoia
- Word-finding problems
- Auditory processing problems
- Reading difficulties
- Emotional instability

## **Problems with the Nondominant (Usually right) Temporal Lobe**

- Difficulty recognizing facial expression
- Difficulty decoding vocal intonation
- Implicated in social-skill struggles

## **Problems with Either or Both Temporal Lobes**

- Memory problems
- Headaches or abdominal pain without a clear explanation
- Anxiety or fear for no particular reason
- Abnormal sensory perceptions, visual or auditory distortions
- Feelings of déjà vu (that you have previously experienced something when you haven't) or jamais vu (not recognizing familiar people or places)
- Periods of spaciness or confusion
- Religious or moral preoccupation
- Hypergraphia, excessive writing
- Seizures

## **Things that help:**

- Create a Library of wonderful experiences
- Sing whenever/wherever you can
- Use humming and toning to tune up your brain

- Listen to Classical music
  - Learn to play a musical instrument
  - Move in rhythms
  - Consider temporal lobe medications
  - Get enough sleep
  - Eliminate caffeine and nicotine
  - Watch your nutrition
  - Try EEG biofeedback
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## HOW TO MAKE YOUR BRAIN GREAT

### Prescriptions

- Protect the brain from head injuries – wear a helmet that fits; use your seat belt
- Exercise - dance - play table tennis – the best sport because it utilizes eyes, hands and feet
- Avoid toxic substances
- Drive in safe vehicles – keep them repaired
- Do not use too much of caffeine, alcohol, drugs and nicotine and many pain and anxiety medicines
- Get enough sleep – less than a minimum of six hours decreases blood flow to the brain
- Feed the brain right - eat right to think right - you are what you eat
- Anything that decreases blood flow to the brain will prematurely age the brain
- Work your brain by learning new and different things
- Stop drinking diet sodas

**Best brain diet** is lean protein, good complex and low glycemic carbohydrates

- Green leafy vegetables and vegetables in general of many colors which increase antioxidants
- Decrease trans fats but not all fats since 60% of brain is fat and especially needs omega 3 fatty acids- 100 trillion brain cells are made of long chain fatty acids - get from fish, avocados, and walnuts – walnuts have 3 xs the fatty acids as almonds
- Water is critical to brain - drink plenty through the day - 80% of the brain is water
- Blueberries are excellent
- Broccoli for folate
- Green tea for theanine and to help relax - Decaf green tea is better
- Oatmeal
- Oranges for vitamin C
- Red bell peppers have more vitamin C
- Spinach
- Tuna
- Turkey
- 100% multi vitamin supplement
- Fish oil supplement daily (or flax oil if vegetarian)

Dr. Amen has many detailed suggestions to assist in brain recovery. There are also tests to help determine the source of problems, many case histories and many brain scan pictures. There is an excellent “things to do and don’t do” summary list at the back of the book.

## CHANGE YOUR BRAIN, CHANGE YOUR LIFE

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