

Natural Ways to Heal the Brain

Brain Healthy Supplements

- **Nutrient depletions**
- **Pros versus cons**
- **For all – multiple vitamin, fish oil, vitamin D**
- **Brain type**
- **Craving control**
- **Mood**
- **Energy, Focus**
- **Memory**

Medication Effects and Nutrient Depletions

- **Antacids:** decrease HCL, CA²⁺, phosphorus, folic acid, K⁺
- **Female Hormones:** FA, Mg, B vitamins, C, Zn, Se, CoQ10
- **Anti-Diabetics:** CoQ10, B12
- **Antihypertensives:** B6, CoQ10, Mg, K, Zn
- **Anti-inflammatory:** Ca, K, Zn, Fe, B6, C, D, FA, K
- **Cholesterol-lowering:** CoQ10, Omega-3 fatty acids, carnitine
- **Antibiotics:** B vitamins, vitamin K
- **Oral Contraceptives:** B vitamins, Mg, FA, Se, Zn, Tyrosine, SEROTONIN, elevated homocysteine

Supplement Benefits

- **Never have to reveal to insurance company**
- **Less expensive**
- **Generally significantly fewer side effects, but not NO side effects**
- **Some effective for mild to moderate problems**
- **Generally, have increased compliance**

Supplement Problems

- **May be more expensive because usually not covered by insurance**
- **Many not aware of potential side effects**
- **Quality control/standardization issues**
- **Consultant may be clerk at the grocery store**
- **Fewer studies as it is hard to maintain patents on these products**

Recommendations for All

- **Multiple vitamin**
- **More fish or omega-3 fatty acid supplement**
- **Test and optimize Vitamin D level**
- **Then, issue specific strategies**

Multiple Vitamin

- Most people do not eat 5 servings of fruits and vegetables a day
- 1998 NEJM, *“Eat right and take a multiple vitamin”*
- 2002 JAMA, *“It appears prudent for all adults to take vitamin supplements for prevention of chronic diseases.”*
- MV - Placebo controlled trial of 215 men - significant improvement in perceived stress, general health, vigor after 33 days

Multiple Vitamin

- **R-DB-PC study of 215 men showed significant improvement in perceived stress, general health, vigor after 33 days treatment with multi-vitamin complex**

NeuroVite Plus



- **50 brain supporting nutrients**
 - ❖ **including ALC, ALA, PS, CoQ10**
- **Complete MV/mineral complex**
- **High B vitamins, B6, B12, 5MTHF**
- **2,000 IUs Vitamin D**
- **Phytonutrients – blueberries, spinach, tomato, apple, broccoli, 2 glasses of wine (without alcohol)**
- **Digestive enzymes**

Omega-3s

Low Levels

- Heart disease
- Strokes
- Depression
- Suicidal behavior
- ADHD
- Dementia
- Obesity

Benefits

- Heart
- Skin
- Eyes
- Joints
- Brain
- Decrease appetite & cravings
- 2-3 grams a day

Sample/Omega-3 Studies

Higher EPA for ADHD and Depression

- **Stevens 1995, Burgess 2000, low in ADD**
- **Stoll 1999, longer remissions in treated BP**
- **Nemets 2002, 1-4g positive add on effect**
- **Peet 2002, 1g EPA helpful in depression**
- **Zanarini 2003, help in Borderline PD**
- **Su 2003, add on MDD improved response**
- **Frangou 2006, 1g EPA helpful in bipolar**
- **Su 2008, helpful in depression + pregnancy**



Sample/Omega-3 Studies

Higher EPA for ADHD and Depression

- **Jazaveri 2008 1g EPA = fluoxetine, both better together**
- **Amminger 2010, 1.2g decreased psychosis in vulnerable**
- **Mossabeh 2014, 1.2g decrease risk of psychosis in vulnerable patients by 12 weeks**
- **Amminger 2007, 1.5g helpful for autism**



Omega-3 Power

- **Highly purified**
- **Independently tested**
- **2.8g fish oil in 2 capsules**
- **60/40 EPA to DHA ratio**
- **No fish burps**
- **Only 2 plants in the world with this purity**



Low Levels of Vitamin D

- **2/3rds of Americans**
- **Depression – depletes serotonin**
- **Alzheimer's disease**
- **MS – replacement helps prevent relapse**
- **Heart disease**
- **Diabetes**
- **Cancer**
- **Obesity**
- **Interferes with sense of fullness**



Vitamin D

- **25 hydroxy-vitamin D**
- **Normal between 30-100 ng/dl**
- **Optimal between 50-90 ng/dl**
- **Give Vitamin D3 if levels low and retest level so you optimize it, but don't overdo it**
- **Universal risk factor for multifactorial diseases, such as diabetes, heart disease, strokes, cancer and dementia**

Brain Type Help

- **Impulsive**
- **Compulsive**
- **Impulsive-Compulsive**
- **Sad**
- **Anxious**

Impulsive Focus and Energy

- Boost dopamine



Supplement Facts

Serving Size 4 Capsules

Servings Per Container 30

Amount Per Serving	%Daily Value	
Choline (as bitartrate)	55 mg	10%
Green Tea Extract (<i>Camellia sinensis</i>) extract (decaf) (min. 95% [570 mg] polyphenols/70% [420 mg] catechins/ 45% [270 mg] EGCG) (leaves)	600 mg	†
Sensoril® Ashwagandha Extract (<i>Withania somnifera</i> , root/leaves [standardized to 10% [25 mg] Withania glycosides])	250 mg	†
<i>Rhodiola rosea</i> extract (min. 3% [6 mg] rosavins/1% [2 mg] salidroside) (root)	200 mg	†
<i>Panax ginseng</i> extract (min. 15% [30 mg] ginsenosides) (root)	200 mg	†

† Daily Value not established.

Compulsive Serotonin Mood Support

➤ Boost serotonin



Supplement Facts

Serving Size 4 Capsules
Servings Per Container 30

Amount Per Serving	% Daily Value	
Vitamin B ₆ (as pyridoxine HCl & pyridoxal-5-phosphate)	20 mg	1176%
Folate (as Quatrefolic [®] 5-methyltetrahydrofolate, glucosamine salt)	400 mcg DFE ¹	100%
Vitamin B ₁₂ (as methylcobalamin)	500 mcg	20833%
Satiereal [®] Saffron extract (<i>Crocus sativus</i> , stigma) [standardized to 0.34% (0.6 mg) safranal]	177 mg	†
5-Hydroxytryptophan (5-HTP)	100 mg	†

† Daily Value not established.

¹DFE = Dietary Folate Equivalents

Impulsive-Compulsive Focus and Energy + Serotonin Mood Support



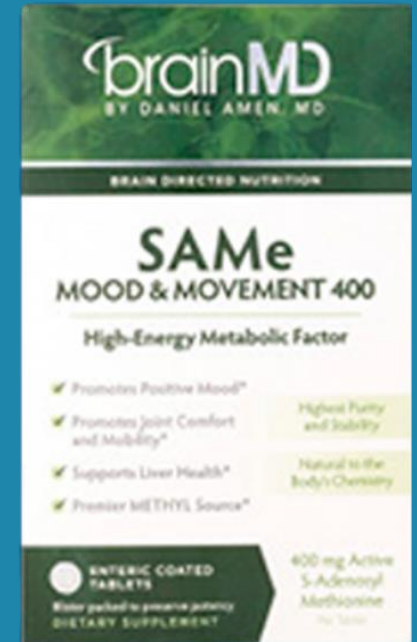
Nutraceuticals - Depression with Evidence

- **A Level - St. John's Wort, SAMe, Sage (music therapy)**
- **B Level - 5 HTP, omega-3s, saffron, DHEA**
 - ❖ **Folate, folinic acid, 5MTHF**
 - ❖ **N-acetyl-cysteine (NAC)**
 - ❖ **hypnosis, yoga, psychotherapy, aromatherapy**

5HTP

- **Depression, cerebellar ataxia, fibromyalgia, obesity, headaches**
- **B Level**
- **Dose 50 – 150mg twice a day with meals**
- **Insomnia dose 100-300mg a bedtime**
- **15 studies have evaluated the clinical effects of 5-HTP on depression 285/511 patients improved**
- **Oral admin assoc with 30% in 5HIAA in CSF**

SAMe – s-adenosyl-methionine



- Depression and pain syndromes
- B Level, moving closer to A
- Dose 400 – 800mg twice a day
- Watch bipolar patients carefully
- 26 studies for depression, 11 RDBC > 1050 pts
- SE more stimulating (insomnia, anxiety)
- Equally effective to tricyclics, fewer side effects
- AJP 2010 enhance treatment resistant patients on SSRIs and well tolerated

Folate (B9), Folinic Acid, 5-MTHF

- **B Level**
- **Check MTHFR gene**
- **If present add 800 mcg folate, 7.5mg 5-MTHF, 15-30mg folinic acid (avoid high dose folate, may decrease natural killer cells) as augmentation strategy**
- **Stronger response in women**
- **Folate depletion caused by anticonvulsants, BCP, metformin, lithium, methotrexate, smoking, alcoholism, poor diet**

Saffron (*Crocus sativus*)

- **Spice, traditional Persian remedy for depression**
- **C/B Level – encouraging results in diverse areas**
- **Dose 30mg/d**
- **2 DB RPBC studies positive (n = 80); 3 DBRC (fluoxetine 20mg, imipramine 100mg) studies showed equal efficacy)**
- **Positive study for PMS (DBPC) and age associated memory problem**
- **Counteracts sexual side effects of SSRIs (DBPC)**
- **Reduces snacking (DBPC)**
- **Helps insulin sensitivity**

SAD

SAMe Mood and Movement Support

- Boost dopamine and norepinephrine
- SAMe



Nutraceuticals - Anxiety with Evidence

- **Elevated daytime cortisol – Relora 1 cap TID**
- **Elevated evening cortisol – PS 300-1,000mg HS**
- **A Level - Kava – avoid due to safety concerns (music therapy)**
- **B Level**
 - ❖ **St. John's Wort (somatoform disorder), 5HTP, Inositol (panic disorder and OCD)**
 - ❖ **(meditation, hypnosis, acupressure, yoga, aromatherapy)**
 - ❖ **Consider – l-theanine, Relora, Holy Basil**

Anxious

Everyday Stress Relief

Supplement Facts

Serving Size 4 Capsules
Servings Per Container 30

Amount Per Serving		% Daily Value
Magnesium (as glycinate and malate)	30 mg	7%
Relora® Powder (<i>Magnolia officinalis</i> and <i>Phellodendron amurense</i> , bark)(min. 1.5% [11.25 mg] honokiol, 0.1% [0.75 mg] berberine)‡	750 mg	†
L-Taurine	750 mg	†
Holy Basil Extract (<i>Ocimum sanctum</i> , leaf) (2% [12 mg] ursolic acid)	600 mg	†
L-Theanine	200 mg	†

† Daily Value not established.



NAC – n-acetyl-cysteine

- **Oxidative stress and abnormal glutathione seen in many psychiatric illnesses (dep, BP, schz)**
- **Lithium and valproate buffer oxidative defenses**
- **NAC shown to increase glutathione levels**
- **Shown to improve +/- sx's in schizophrenia**
- **Better than fluoxetine for tricotillomania**
- **Decrease cravings for cocaine, alcohol, gambling, marijuana**
- **Reduced depression in bipolar depressed**
- **Dose 1,200 – 2,400mg a day**

Not Just for Cravings

Craving Control



Supplement Facts

Serving Size 6 Capsules
Servings Per Container 15

Amount Per Serving	% Daily Value	
Chromium (as picolinate)	1000 mcg	2857%
N-Acetyl-L-Cysteine (NAC)	1200 mg	†
L-Glutamine	1000 mg	†
Alpha-Lipoic Acid	300 mg	†
DL-Phenylalanine	200 mg	†

† Daily Value not established.

Nutraceuticals - Sleep with Evidence

- **A Level – Melatonin – jet lag, initial insomnia**
- **B Level – (music therapy, tai chi)**
- **Also consider:**
 - **Magnesium glycinate**

The Hammer Restful Sleep

Supplement Facts		
Serving Size 2 Capsules		
Servings Per Container 30		
Amount Per Serving	% Daily Value	
Vitamin B ₆ <i>(as pyridoxine HCl, pyridoxal-5-phosphate)</i>	10 mg	588%
Magnesium <i>(as glycinate and malate)</i>	50 mg	12%
GABA <i>(Gamma-Aminobutyric acid)</i>	375 mg	†
Valerian extract <i>(min. 0.8% valerenic acid)(Valeriana officinalis, root)</i>	300 mg	†
Melatonin	2.5 mg	†
† Daily Value not established.		



Nutraceuticals – Memory Enhancement

- **A Level – Gingko, Sage**
- **B Level – Huperzine A**
 - **Vinpocetine**
 - **Acetyl-l-carnitine**
 - **Phosphatidylserine**
 - **Omega-3s**

Mind the Gap of Your Mind

Brain and Memory Power Boost



Supplement Facts

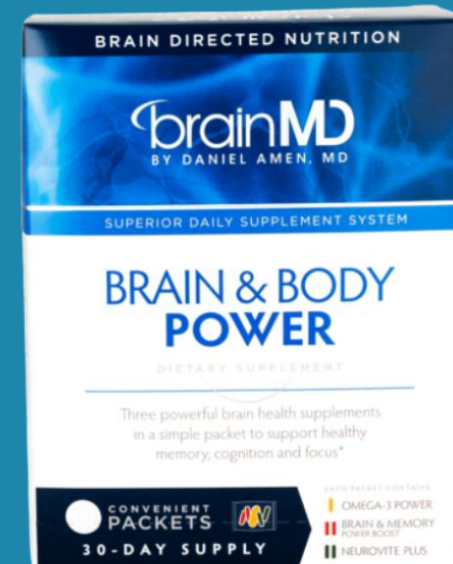
Serving Size 4 capsules
Servings Per Container 30

Amount Per Serving	% Daily Value	
PhosphatidylSerine (PS) <i>(as Sharp PS® Green from sunflower lecithin)</i>	100 mg	†
AcetylCarnitine <i>(as acetyl-L-carnitine HCl)</i>	666 mg	†
N-AcetylCysteine (NAC)	400 mg	†
Alpha-Lipoic Acid	200 mg	†
Ginkgo Biloba Extract <i>(PureLeaf®)(Ginkgo biloba, leaf) (standardized to 24% [29 mg] ginkgo flavonols, 6% [7 mg] terpene lactones, ≤ 5 ppm ginkgolic acid)</i>	120 mg	†
Huperzine A <i>(Huperzia serrata)</i>	100 mcg	†

† Daily Value not established.

Brain & Body Power

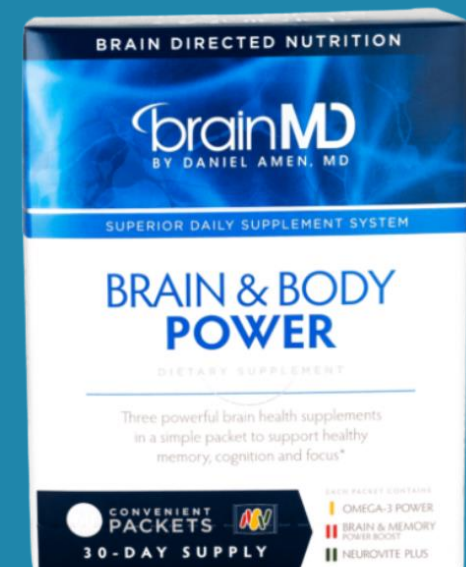
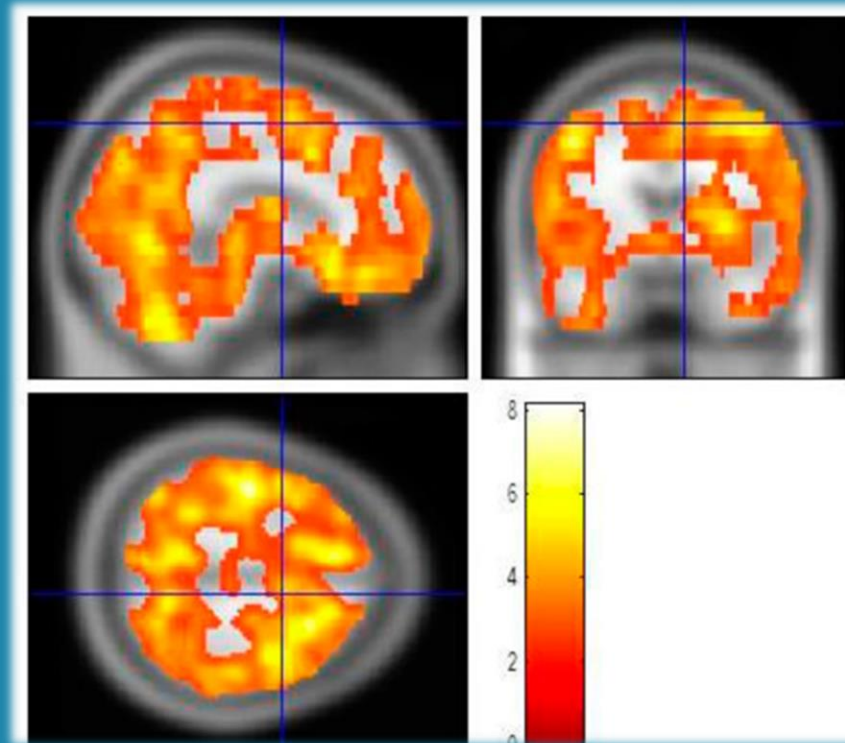
- NeuroVite Plus
- Omega-3 Power 2.8g
- Brain & Memory Power Boost – 4
- 2 High-Quality Studies



Brain & Body Power

Double Blind, Placebo Controlled Trial

- Significant improvement in blood flow to the brain



Brain & Body Power

Double Blind, Placebo Controlled Trial

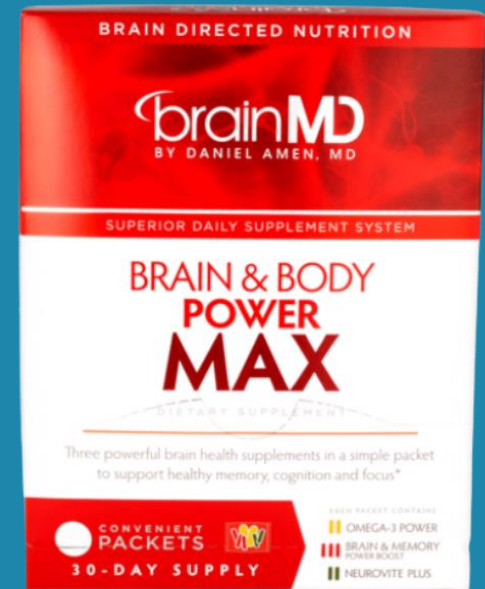
- **Significant improvement**
- **Overall cognitive function**
- **Memory**
- **Reasoning**
- **Processing speed/accuracy**
- **Executive function**
- **Mood**
- **Emotional identification**
- **Lower hostility**
- **Lower somatization**
- **Less obsessiveness**



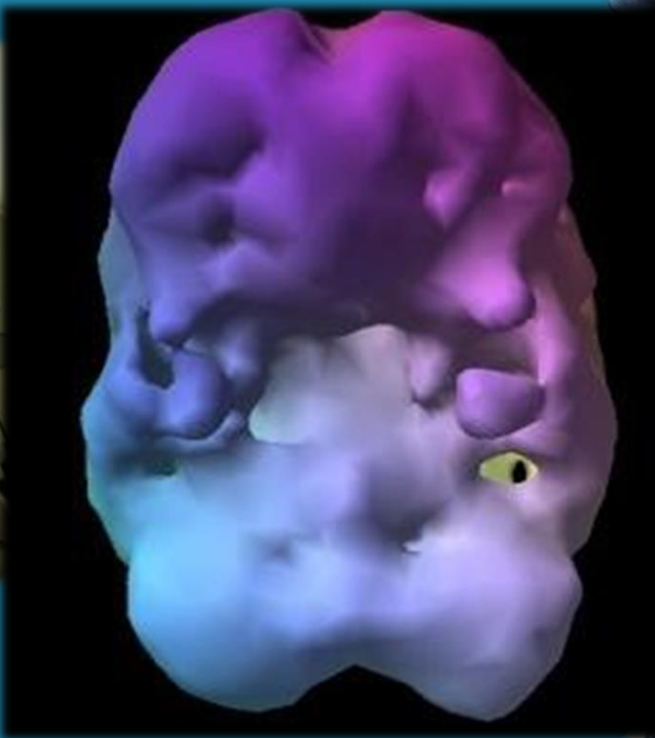
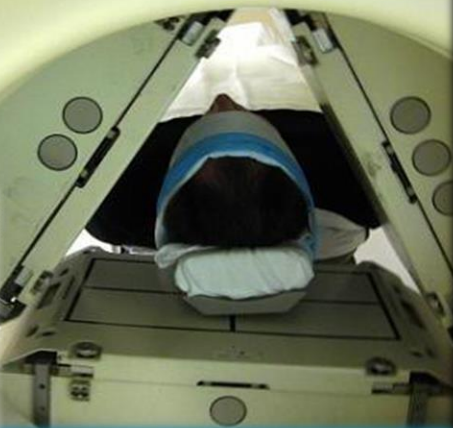
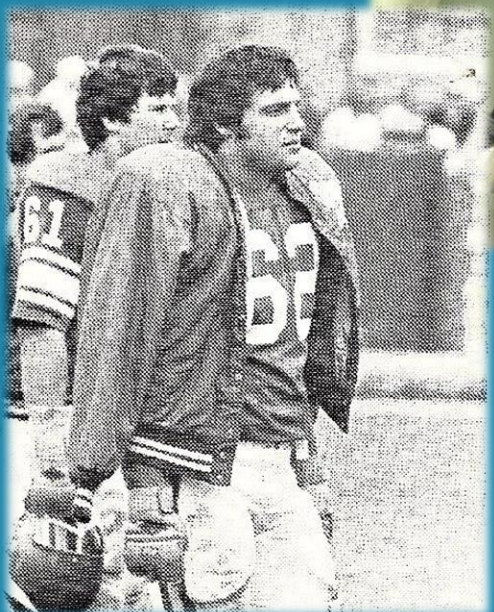
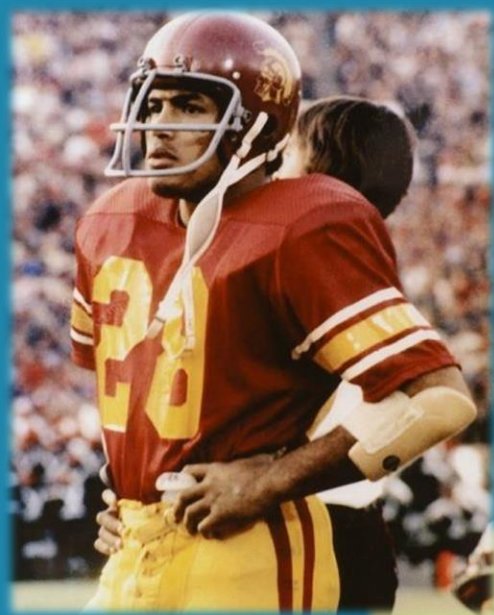
Brain & Body Power MAX

Double Blind, Placebo Controlled Trial

- NeuroVite Plus
- Omega-3 Power 5.6g
- Brain & Memory Power Boost – 6
- NFL Study



Amen Clinic NFL Brain Imaging Brain Rehab Study

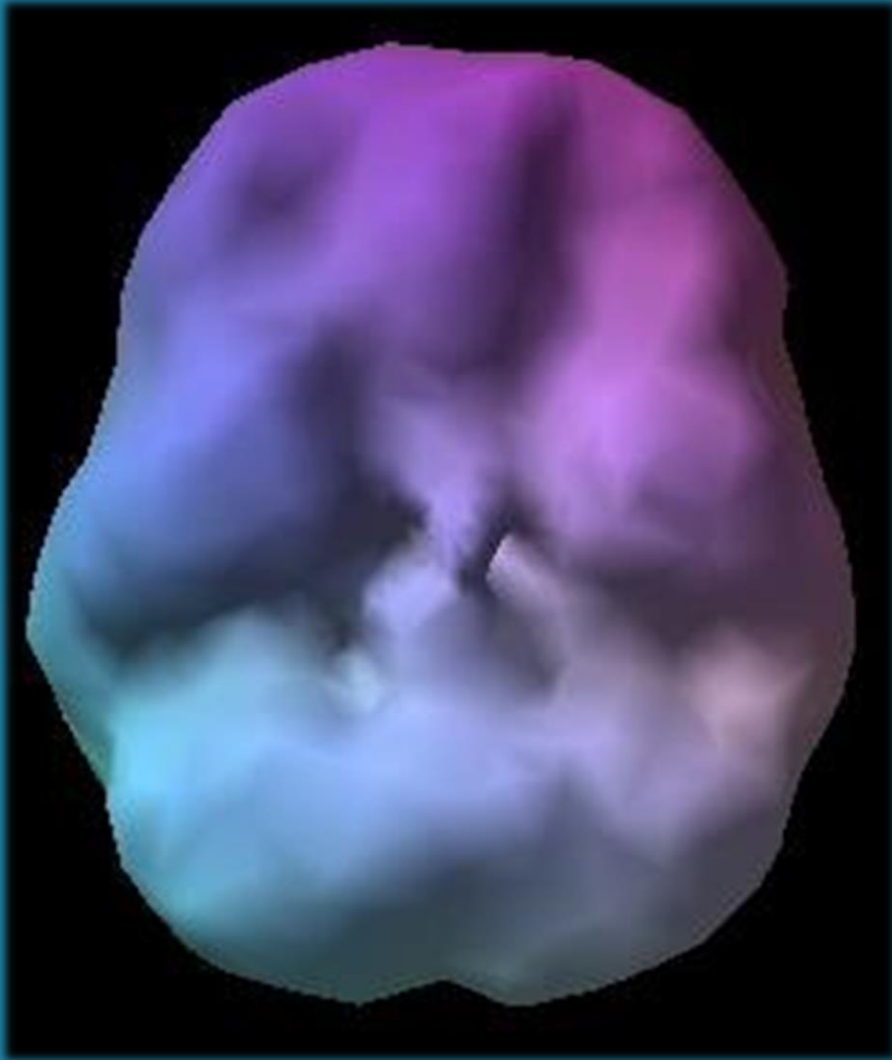


2007

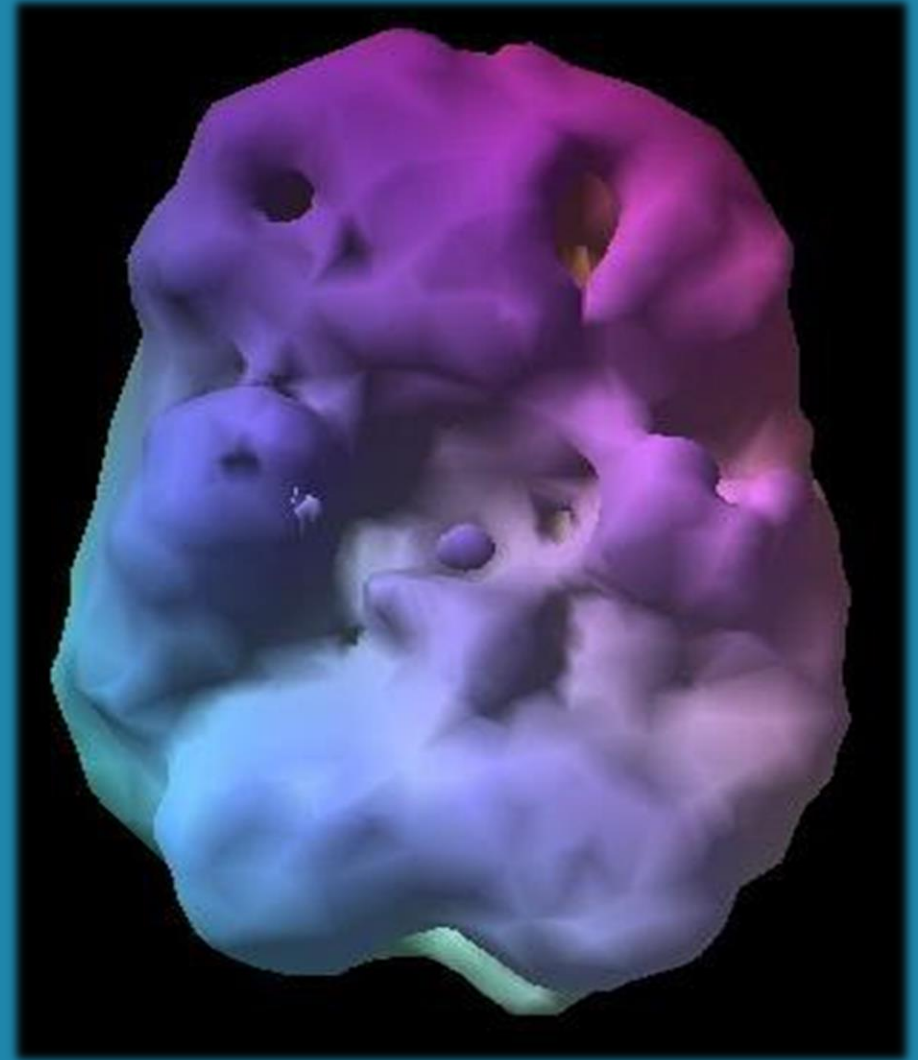
Anthony Davis

**College Football Hall of
Fame Running Back
from USC and NFL
Player**

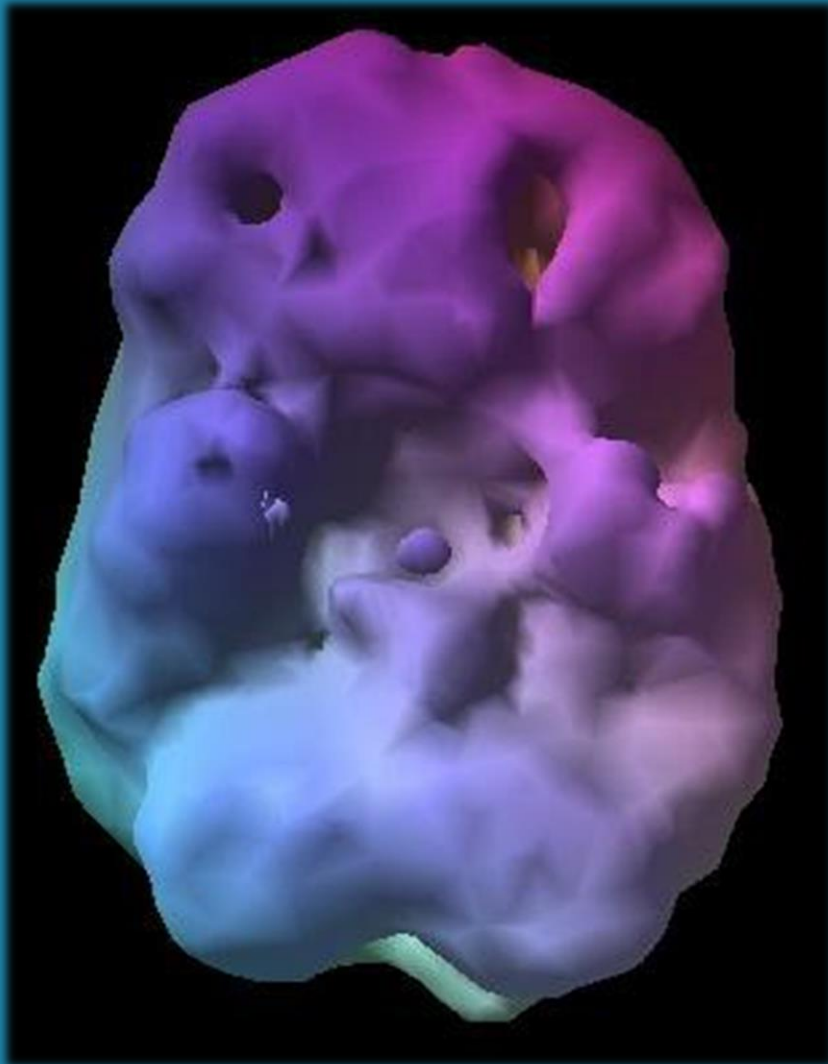




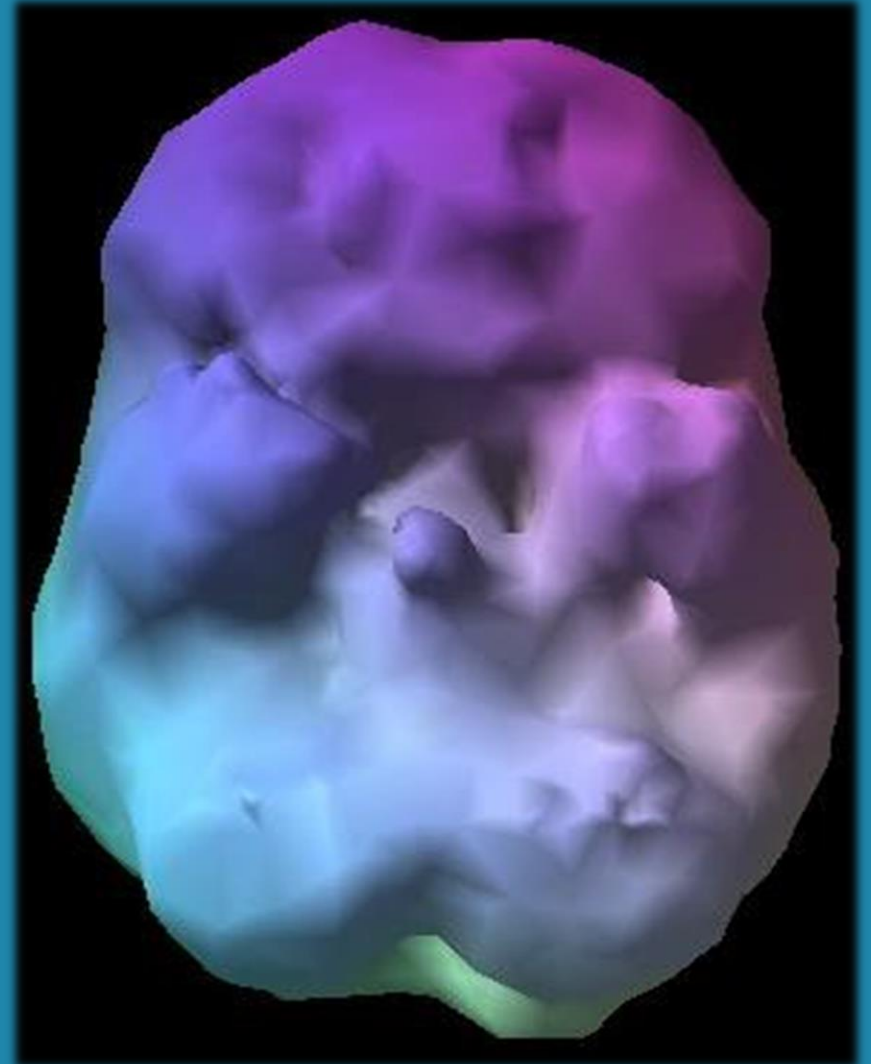
Healthy



**At Age 54, Brain
Looked 85**



Before Treatment



After Treatment

MicroCog	Before	After	p value	#> 50% better
General cognitive functioning	31.8 (24.1)	43.4 (25.7)	<0.000	25
General cognitive proficiency	24.7 (20.1)	35.2 (23.5)	<0.000	25
Processing speed	33.1 (24.8)	39.3 (25.5)	0.026	24
Processing accuracy	40.9 (28.7)	48.5 (29.1)	0.012	26
Attention	38.4 (26.2)	48.7 (27.6)	0.025	8
Reasoning	32.7 (25.7)	41.6 (28.0)	0.006	22
Memory	33.8 (27.4)	42.9 (28.4)	0.022	34
Spatial processing	69.0 (21.8)	74.3 (13.2)	0.154	6

Elston Ridgle (45) Before After % ▲

General Cognitive Fun. 39 61 56%+

Information Processing 53 81 53%+

Attention 45 45 0%

Reasoning 50 77 54%+

Memory 25 73 192%+



Ed White (62)

Before

After

% ▲

General Cognitive Fun.

21

39

90%+

Information Processing

25

58

> 100%+

Attention

21

25

2%

Reasoning

3

13

> 400%+

Memory

14

66

> 470%+



John Hauser (74) Before After % ▲

General Cognitive Fun. 19 42 121%+

Information Processing 55 90 64%+

Attention 12 58 383%+

Reasoning 39 50 28%+

Memory 23 39 70%+



Gern Nagler (77) Before After % ▲

General Cognitive Fun. 63 77 22%+

Information Processing 42 70 66%+

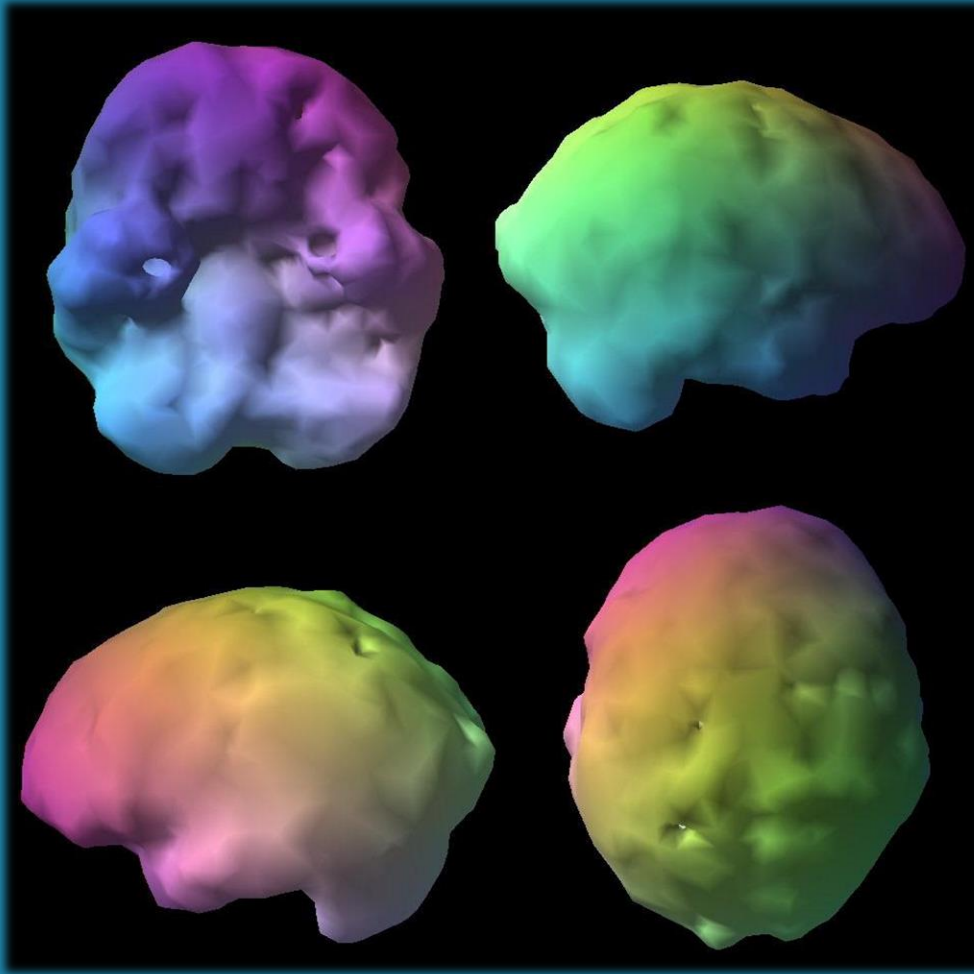
Attention 45 73 62%+

Reasoning 75 75 0%

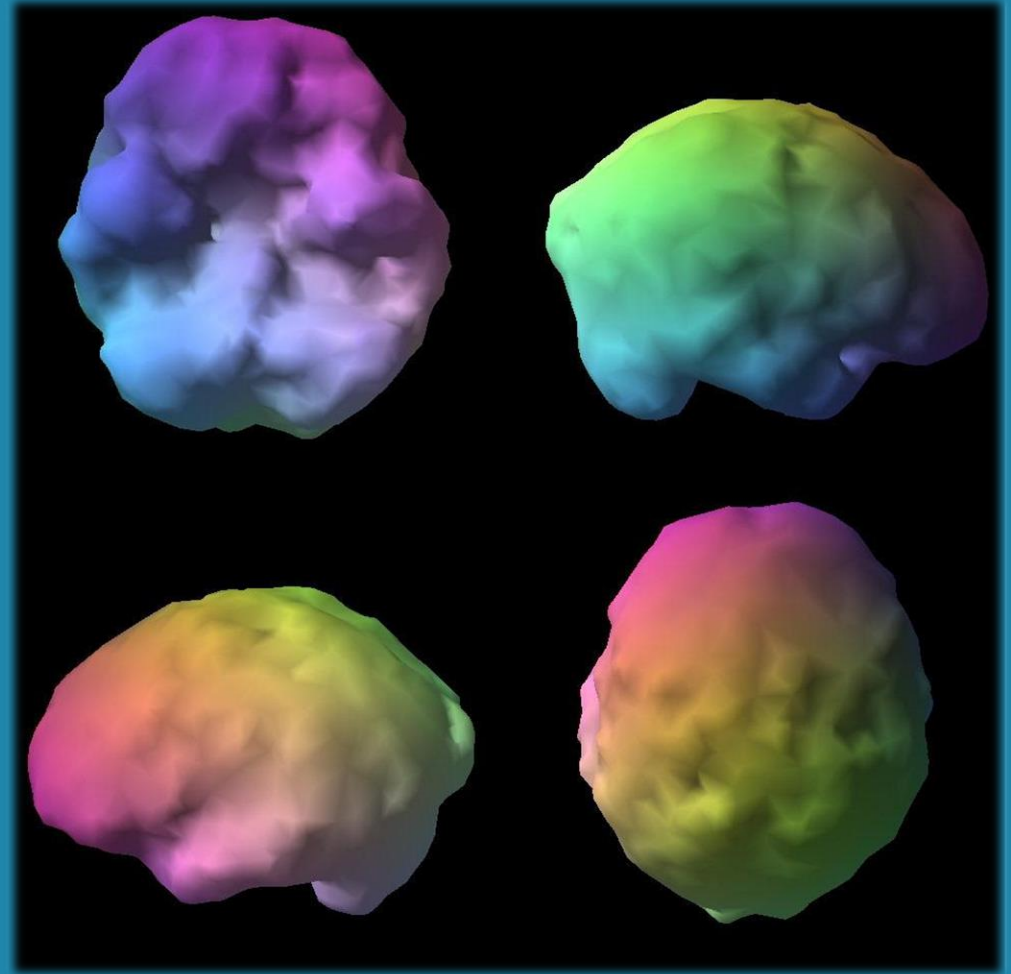
Memory 50 86 72%+



Cam Cleeland

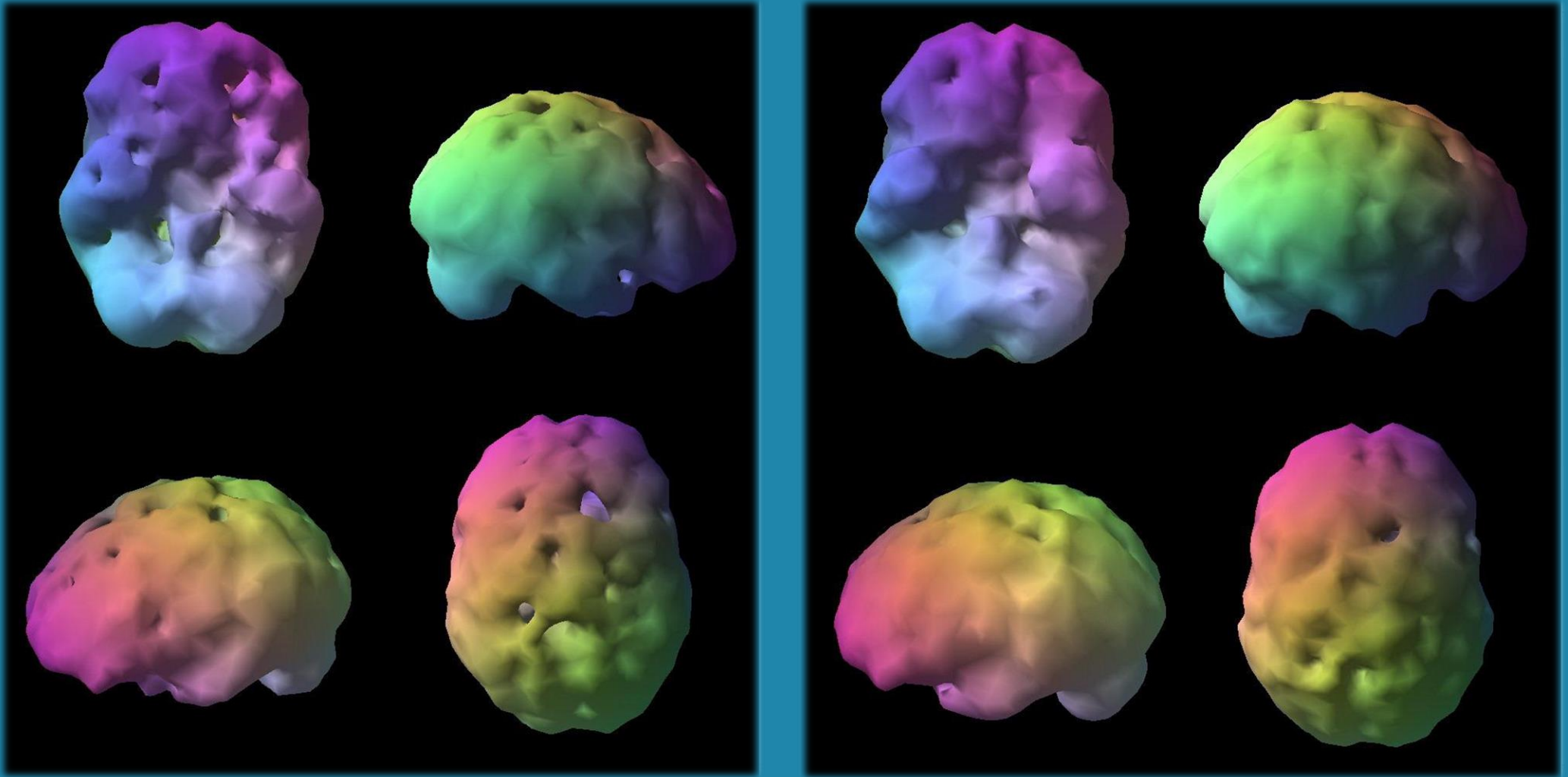


Before



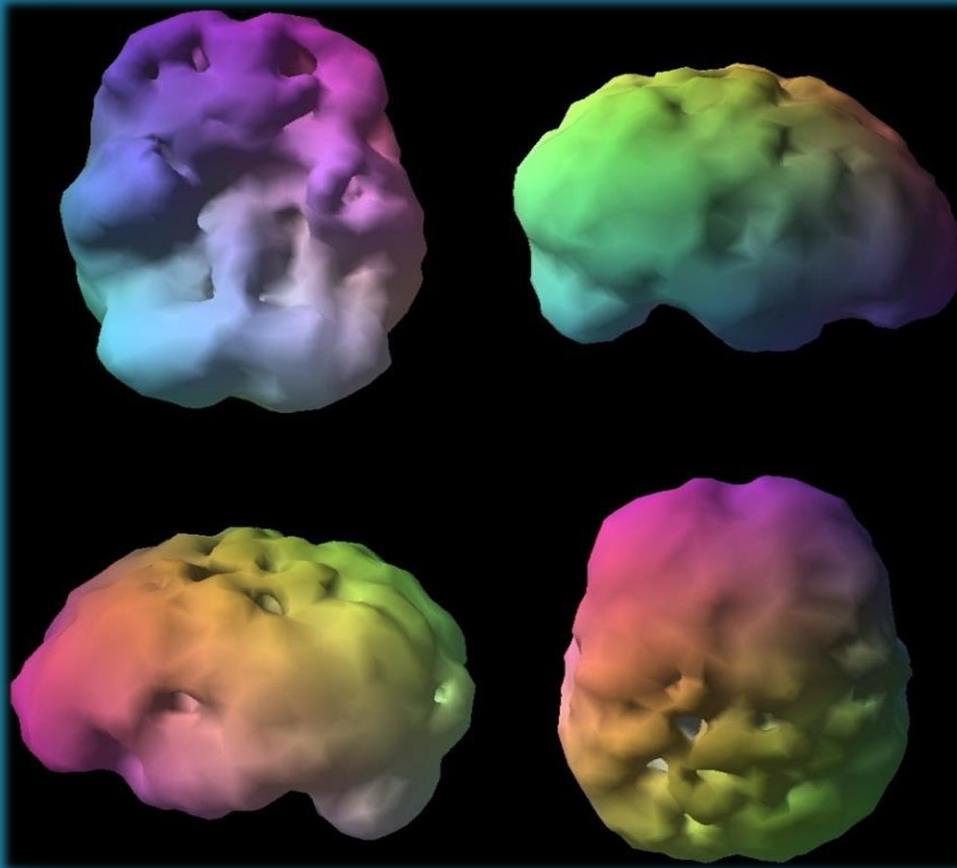
After 8 mos

George Visger Before and After

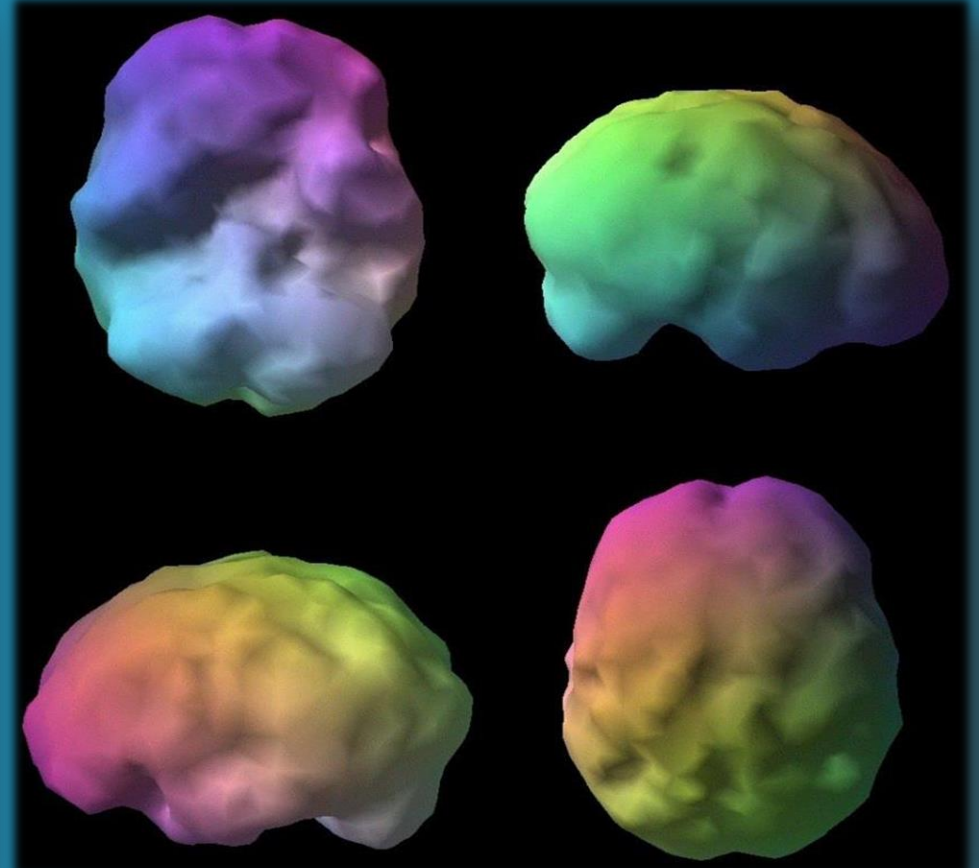


Our Interventions Plus 40 Sessions of HBOT

RP – Stanford and Broncos 5th to 53rd %ile in Memory

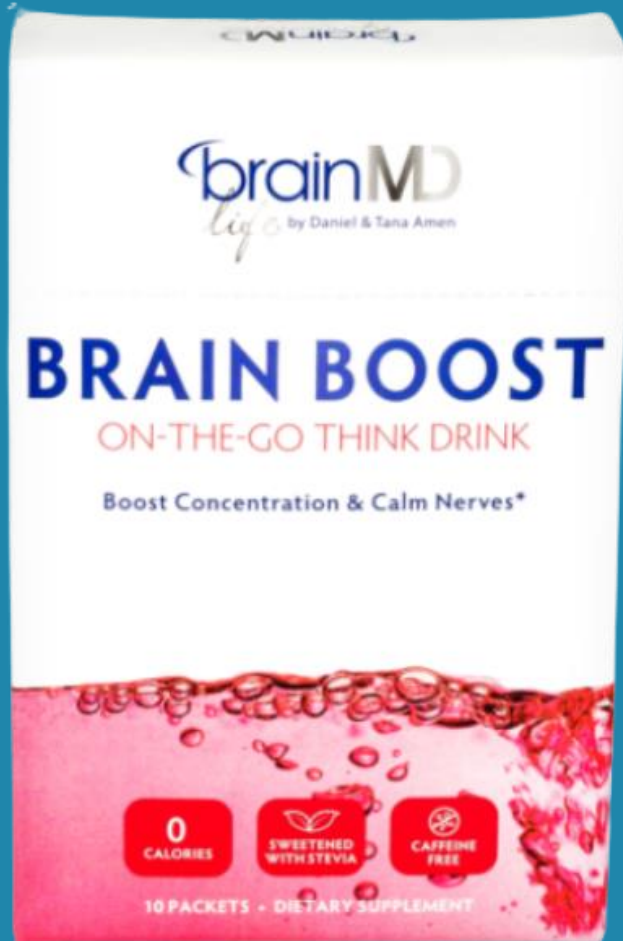


Before



After

Think Drink



Supplement Facts

Serving Size 1 Packet (5.5 g)

Servings Per Container 10

Amount Per Serving	% Daily Value**	
Calories	0	
Total Fat	0 g	
Total Carbohydrate	1 g	<1%
Dietary Fiber	<1 g	1%
Total Sugars	0 g	
Protein	0 g	†
Vitamin B ₆ (as pyridoxal-5-phosphate)	6 mg	353%
Folate (as Quatrefolic® methylfolate) 100 mcg DFE ¹ (5-methyltetrahydrofolate, glucosamine salt)		25%
Vitamin B ₁₂ (as methylcobalamin)	100 mcg	4167%
Calcium (as tricalcium phosphate)	38 mg	3%
Phosphorus (as tricalcium phosphate)	18 mg	1%
Potassium (as potassium bicarbonate)	560 mg	12%
L-Theanine	100 mg	†
Proprietary Organic Fruit Blend	290 mg	†
Blueberry (<i>Vaccinium corymbosum</i>), Goji (<i>Lycium barbarum</i>), Mangosteen (<i>Garcinia mangostana</i>), Noni (<i>Morinda citrifolia</i>)		

** Percent Daily Values are based on a 2,000 calorie diet.

† Daily Value not established. ¹DFE = Dietary Folate Equivalents.