

## Top 10 Strategies for Caring for Our Brains

If we want to keep our minds sharp and maintain our relationships, we need to care for our brains. My Top 10 Strategies for Caring for Our Brains are for people of all ages, so what works best for you will depend on various factors, though for everyone, the first 9 are so you can do more of 10. The central theme is, “**Don’t Shrink Your Brain!**”

The purpose of my Aging and Your Mind seminar is to ignite discussions we should all be having with family, friends, physicians and other advisors, but aren’t. Please do your own research and challenge any ideas and opinions I put forward as I continue to learn myself.

Of course consult your physician before beginning exercise, fasting, changing any medications, or taking supplements. Do be aware that we need to help our physicians who themselves are overwhelmed, in shortening supply, and likely weren’t one of the 5% or less who took a single course in nutrition in medical school, and even less likely to have taken a geriatric care course. Where these strategies diverge from conventional thinking, the books in my reading list at the end of this handout provide the justifications, references and more needed to win over naysayers.

1. **Move – Aerobic Exercise – Meaning Really Move**
2. **Eliminate Processed Sugar – The New Tobacco**
3. **Oil Change – Go to Sea, Not to Seed & Fat is Back!**
4. **Question Statins – Cholesterol and Big Fluffy LDL are Good**
5. **Heal Your Gut – Heal Your Brain**
6. **Eliminate Glyphosate, Synthetic Pesticides & Mercury**
7. **Vitamins, Minerals & Supplements – What to Take!**
8. **Meditation – Brain Training**
9. **Power Fast – Combine with Exercise, Meditation, and Good Fats**
10. **Learn New Things, Play, Socialize, & Be Productive**

### Alzheimer’s Alert

If you or a loved one has been diagnosed with MCI (mild cognitive impairment) or Alzheimer’s disease (AD), jump ahead to the end. Thanks to Amy Berger’s new book, **The Alzheimer’s ANTIDOTE**, we now know more than what to try, we know what works!

#### 1. **Move – Aerobic Exercise – Meaning Really Move**

We were born to be agile and nimble all of the time, regardless of age. It makes sense that aerobic exercise is great for building and maintaining our brains.

- Walk - build up to brisk walking, swimming, biking or equivalent for 30 minutes a day
- Recent research shows every other day may be just as effective
- Incorporate strength training, interval training, and stretching
- Even better is to learn new movements creating new connections between neurons
- Dance - much success for those with dementia when given opportunities to dance
- In a park, in a mall, in a pool, or in a chair, participate in a group to socialize

**Aerobic Exercise Benefits**

- Increases BDNF\* (brain derived neurotrophic factor) – think of brain fertilizer
  - Activates brain stem cells to convert into new neurons – neurogenesis
  - Protects and strengthens connections between brain cells – neuroplasticity
  - Also increased by meditation, fish oil and coconut oil, and good gut bacteria
  - Not surprising, sugar suppresses BDNF
- Increases GABA (gamma-aminobutyric acid) – think of natural valium
- Supports a diverse gut microbiome – your good bugs like to move, too!
- Reduces muscle tension and calms your body, brain, and immune system
- Triggers more insulin receptors, better use of blood glucose, and stronger cells
- Expands the vascular system in the brain for more efficient blood flow
- Reduces beta-amyloid protein fragments, trademarks of Alzheimer’s Disease

**2. Eliminate Processed Sugar – The New Tobacco**

Sugar uses up your body’s store of vitamins and minerals without any benefit, while wreaking havoc. However, eliminating sugar is not easy:

- First, because we are addicted to sugar. We evolved consuming just 20-25 teaspoons of sugar a year and we now consume 50 teaspoons a day. We have overloaded our systems.
- Second, because processed sugar is in everything. Certainly in everything in the aisles of your grocery store, so only shopping the outer wall is a good rule.
- Third, because addiction to sugar is more insidious than addiction to tobacco. Why? Because with tobacco you decided, while with sugar we parents addict our babies.

To beat your sugar addiction requires retraining more than just your taste buds. Your head brain, gut brain, and your senses of sight, smell, and touch are all involved. DON’T try fooling yourself with sugar substitutes, whatever the packet color. If you must, go with local raw honey, stevia, and/or erythritol, the least offensive of sugar alcohols, though there is still the need to retrain away from your sweet cravings.

Look to fruits lowest in sugar, including berries and watermelon. An apple a day, while full of great nutrients, is also full of about 24 grams of sugar (or 6 teaspoons), while a full serving of watermelon has just 3 grams. And, unless organic, apples have one of the highest load of pesticides. As for starting your day with a glass of OJ, you are injecting 24 grams of sugar with an 8 oz. glass – a real success for advertising and hype about Vitamin C.

**Glycation**

If what you’ve heard already isn’t enough to quit sugar, glycation is the bonding of sugar molecules to proteins, fats, and amino acids. Glycation forms AGEs (Advanced Glycation End-Products) that cause protein fibers to become misshapen and inflexible. Glycation wrinkles you inside and out. Think of wrinkled skin. Now think of wrinkled and shrinking brain. Guess what receptors for AGEs are called? Yup – RAGEs!

**3. Change Your Oil – Go To Sea, Not To Seed & Fat is Back!**

Good oils help cells get nutrients in and waste out easier, while also prolonging the life of the cells. We evolved on seafood oils and have replaced them with seed oils, mostly soybean. Today, up to 20% of calories consumed in the U.S. are from soybean oil, 98% of which is GMO. Soybean and corn oil are high in fragile, easily oxidized polyunsaturated fatty acids.

Another to change is from using canola oil that is made from glyphosate-ready rapeseed. We need to change from soybean, corn, and canola oils to coconut oil, olive oil, and fish oil preferably from eating cold water fish 2-3 times a week, and to butter and ghee, from grass-fed and grass-finished cattle, of course.

### **Fat is Back**

As part of our oil change, we also need to change our fats. We have been wrong for decades about ridding saturated fats from our diet. Your taste buds are in for fun as full-fat butter, cheeses, shellfish, beef, and even pork are your new super brain foods. Yes, stick with grass-fed and finished or pastured. The types of fat are:

- Saturated – no double bonds – e.g., coconut oil, avocado oil,
- Monounsaturated – single double bond – e.g., olive oil, lard
- Polyunsaturated – two double bonds – OK from whole foods
- Trans – unsaturated fats made to act like saturated fats – avoid all except naturally occurring ruminant acid from cows, sheep, goats, and deer, e.g., CLA (conjugated linoleic acid) from beef.

Though no fat is entirely saturated or unsaturated, the more double bonds, the more likely to be oxidized – think rancid. You want your cell membranes to include saturated fats with little to no oxidation. Guess what is sent to attempt to shore up cell membranes that have too much polyunsaturated fats? Cholesterol! So, to stabilize cell membranes and give them their proper shape, stiffness or flexibility, better to have more saturated fat in your diet.

### **Omega-6 to Omega-3 Ratio**

We do require polyunsaturated fats known as EFAs, or essential fatty acids, both Omega-3 and Omega-6. It is just that with the massive consumption of vegetable oils, we need far less Omega-6 than is in the western diet. In the U.S., we consume >20:1 Omega-6 to Omega-3 in our diets, while we should be consuming at the most 4:1.

#### **4. Question Statins – Cholesterol Is Good – Big Fluffy LDL is Good**

If you are taking a statin, definitely talk with your Doctor about current research showing the harmful effects. Statins provide little benefit at great risk. Certainly make sure you are taking CoQ10 if you do take a statin as statins inhibit your ability to produce CoQ10.

Cholesterol isn't bad – it is an essential fuel for neurons and building block for cell membranes. Heck, mortality from all causes goes down as cholesterol goes up, and we need more as we age. What goes bad is the carrier protein LDL (low-density lipoprotein) that captures cholesterol from the bloodstream and transports it to neurons. Yes, that's right. LDL isn't cholesterol, good or bad.

And, what is more, depending on the size of the LDL particles, LDL can be good or bad. A specific type of small dense LDL is bad as it is inflammatory and toxic to blood vessels, and makes blood sticky and more prone to clotting. Big and fluffy LDL is actually protective. Ask your doctor to test your LDL using either the VAP (vertical auto profile) or LPP (lipoprotein particle profile) tests. Alternatively, if these tests are too expensive or not available, your TG/HDL ratio (triglyceride/HDL) can be used to estimate LDL particle size and number. A ratio of less than 3.5:1 is acceptable, and less than 2:1 is great.

When sugar molecules attach themselves to LDL, creating **oxidized LDL**, they change the molecule's shape, reducing its ability to transport cholesterol and increasing free radical production. The best way to prevent oxidized LDL is by a diet low in sugar and processed carbohydrates.

## 5. Heal Your Gut – Heal Your Brain

Before you are able to absorb and utilize nutrients, you likely need to heal your gut. By healing your gut, you will grow and feed a diverse population of healthy bacteria and strengthen your gut lining. In addition to eliminating sugar and changing your oil, try:

- Bragg's apple cider vinegar diluted in water – resets stomach PH
  - Low stomach acid results in poor mineral absorption and hypothyroidism
  - If you can't handle, hold your nose, stir in cayenne pepper and/or lemon juice
  - If you still can't stomach ACV at first, go with fresh squeezed lemon-water
- Coconut oil, olive oil, and ghee – healthy digestive fats
- Digestive enzymes – help to absorb nutrients and reduce reflux
- Aloe Vera juice – helps regulate gut PH and grow healthy bacteria
- Bone broth – helps heal the gut and reduce inflammation throughout the body
- Eliminate gluten - interferes with the breakdown and absorption of nutrients
  - Assaults the gut lining and increases inflammation
  - Causes production of zonulin that opens the gate of intestinal wall – and keeps open!
  - Gluten in the body causes immune response that also attacks your thyroid
  - Exposure to gliadin in gluten makes the blood-brain barrier more permeable
  - At least only non-hybrid wheat such as ancient or heirloom – once gut healed
- Green smoothies – help detoxify and prevent cell damage
  - Greens – ½ cup of kale, or spinach, dandelion, watercress, romaine, celery
  - Low sugar fruits – blueberries, raspberries, strawberries, watermelon
  - Other ingredients to try – ginger, lemon, vanilla, avocado, aloe vera
- Plant protein smoothies – amino acid glutamine helps protect gut lining - avoid whey, soy or egg protein powders as tougher on the gut – three we alternate using:
  - SunWarrior – Warrior Blend
  - Garden of Life – Raw Protein
  - Alive! Ultra-Shake Pea Protein
- Beef protein smoothies – we are ordering our first products that bring the benefit of beef protein, bone broth and collagen from grass fed and grass finished cows.
  - Design for Health – Pure Paleo Protein
  - The Myers Way – Collagen Protein
  - Ancient Nutrition – Bone Broth Protein

The 21-Day Belly Fix by Taz Bhatia, MD and Brain Maker by David Perlmutter, MD provide detailed plans and recipes to help us all heal our guts to heal our brains. The Thyroid Connection by Amy Myers, MD provides a 28-day program for those with thyroid problems.

### **Keep LPS in Your Gut**

A good reason to heal your gut is to keep things like LPS (lipopolysaccharide) from entering your bloodstream. LPS is a combination of fat and sugar that protects gram-negative bacteria that make up at least 50% of your gut bacteria. However,

- LPS causes inflammation havoc if it gets into the bloodstream
- LPS decreases production of BDNF – think brain fertilizer
- 3 times the level of LPS in people with Alzheimer’s Disease
- Good bacteria keep LPS in check and a strong gut lining keeps LPS in the gut

Please consider that LPS is used to induce inflammation in studies for Alzheimer’s Disease, Parkinsons, ALS, Rheumatoid Arthritis, depression and autism. Makes sense you don’t want it in your bloodstream and brain. Heal your gut and keep it healed!

### **Canary in the Coal Mine – C-Sections**

Boomer to Millennial Moms who delivered via C-section are likely to benefit from healing their own guts. Since the 80’s, C-sections have risen from single digits to more than 1/3<sup>rd</sup> of all births in the U.S., greatly improving mortality and morbidity for Mom and baby.

However, unaddressed are numerous health issues, including Mom’s own microbiome being hit with powerful antibiotics and pain killers, both of which may impact her baby. As Dr. Perlmutter shared in Brain Maker, those born via C-Section have:

- |                                 |   |
|---------------------------------|---|
| • 5 times the risk of allergies | • 80% increased risk of celiac disease  |
| • 3 times the risk of ADHD      | • 70% increased risk of type-1 diabetes |
| • 2 times the risk of autism    | • 50% increased risk of obesity         |

Babies born via C-section have up to 30% less bio-diversity in their guts and what they have is a different mix, with much lower levels of good bacteria, such as bifidobacteria that helps to mature gut lining. New protocols for both Mom and baby are being used, including seeding the baby’s microbiome at birth and restoring Mom’s microbiome.

So, even if not born via C-section, before a child or grandchild is given major antibiotics for sinus infections, or amphetamines or other mind altering medications for treating the symptoms of ADHD, first work on healing their gut, quitting sugar and restoring their microbiome. Exercise and meditation will help, too. Good news is that our guts are very responsive to rehabilitation.

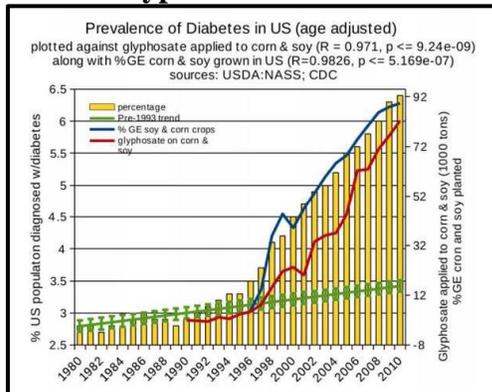
## **6. Eliminate Glyphosate, Synthetic Chemical Pesticides & Mercury**

Whether you buy organic or not will depend on budget and availability. Even if you can’t buy organic, help your brain help your gut by staying away from crops sprayed with huge amounts of the herbicide glyphosate. Wheat in particular is sprayed again just before harvest to maximize yield.

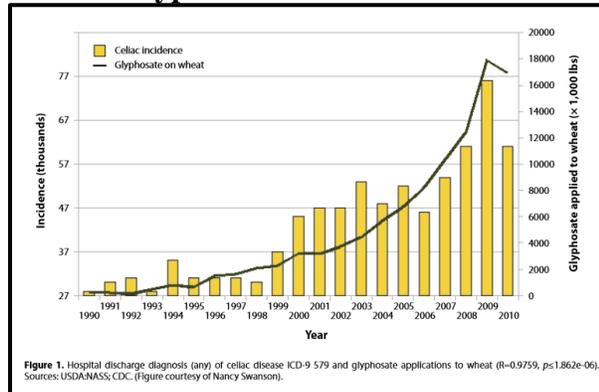
Residual glyphosate changes the composition of gut bacteria and compromises our ability to detoxify toxins, disrupts the blood brain barrier, depletes minerals, and impairs the function of vitamin D. If wheat is a must in your diet, ONLY heirloom, ancient, or imported from Italy or France.

Glyphosate is correlated to rises in diabetes, gluten sensitivity, and celiac disease, and to deaths from thyroid cancer, Parkinson’s disease and end stage renal disease. While correlation isn’t causation, seems to make sense to avoid.

**Glyphosate & Diabetes**



**Glyphosate & Celiac Disease**



To help avoid glyphosate and synthetic pesticides, I’ve assembled lists of what to definitely buy organic, and what should be OK to buy non-organic.

I’ve also assembled two lists of seafood highest in mercury. One is a short list of those to avoid. Meaning don’t eat, EVER. The second is a list of seafood that may be OK occasionally as they are higher in selenium than mercury and selenium binds with mercury and is passed.

A third list is of fish highest in Omega-3s and highest in sustainability, and a fourth list with a couple of surprises where fish farming in the U.S. has advanced, though still avoid any farmed fish if not from the U.S. A fifth list is for shellfish and their nutrients.

**7. Vitamins, Minerals, & Supplements**

You can toss out most multivitamins as they are at best expensive urine, and because of using cheap synthetic versions of vitamins along with fillers and other toxins, may actually be harmful. Still, due to our depleted soil and bombardment from toxins, even with a healthy diet, most people need to supplement with vitamins and minerals. If you do opt for a multivitamin, net out before adding additional vitamins and minerals. Same goes if you take a Vitamin B complex or a Calcium-Magnesium supplement.

- **High-Quality Multivitamin** - sources to check out
  - Thorne Research
  - Integrative Therapeutics
  - The Myers Way Complete Multivitamin for those with thyroid dysfunction
- **Vitamin B12** - 1,000 mcg from all sources, with at least half from methyl B12
  - B12 is required to form the myelin sheath that insulates neuron – cholesterol too!
  - B12 deficiency leads to lower brain volume and cognitive decline.
  - If among 20% with a gene defect need the natural form, methyl B12 or 5-MTHF
- **Vitamin D3** - 5,000 IU/day to start, 2,000 IU/day after 6 months
  - Actually a hormone that helps regulate enzymes and gut bacteria
  - Fat soluble – best absorbed with food, calcium, and Vitamin K
  - Protects neurons from free radicals
- **Calcium**
  - Calcium citrate – 600-800 mg
  - Total of 1,500 mg from diet, multi, and supplements Avoid calcium carbonate which is an industrial mineral

- **Magnesium**
  - Magnesium amino acid chelate – 400 to 600 mg
  - Avoid magnesium carbonate, sulfate, gluconate, or oxide as poorly absorbed
  - CALM drink forms magnesium citrate, great alternative to sugary sports drinks
  - If digestive issues, absorb magnesium e.g., Epsom salt baths, magnesium oil
- **DHA/EPA** – (docosahexaenoic acid/eicosapentaenoic acid) 1,000 mg/day
  - Animal source of Omega 3 polyunsaturated fats
  - Fish oil or algae - DHA/EPA () – freeze if fishy
  - Protects brain, increases BDNF, supports thyroid
  - DHA - 90% of omega-3 fats in brain, 50% of cell membrane
- **Turmeric** – 500 mg 2x/day
  - Curcumin in turmeric activates genes to produce antioxidants
  - Protects mitochondria, enhances growth of new brain cells
  - Inhibits the formation of amyloid proteins
  - Black pepper helps with absorption of curcumin
- **Coconut Oil** - 1-2 teaspoons per day
  - Super fuel for the brain, stimulates growth of new brain cells
  - Reduces inflammation
  - Increases mitochondria
- **Alpha-Lipoic Acid** – 300 mg/day
  - Plant source of Omega 3 polyunsaturated fats
  - Found in every cell, needed to produce energy
  - Crosses the blood-brain barrier
  - Super antioxidant in the brain
- **Probiotics** – beneficial microbes – supplements with at least 30 billion in 10+ strains
  - Fermented foods, including yogurt, sauerkraut and kimchi or from supplements
  - Fortifies the intestinal lining, reducing gut permeability
  - Suppresses bad bacteria keeping the gut in balance
- **Prebiotics** – food for beneficial microbes
  - Raw garlic, leeks, asparagus, dandelion greens, onions cooked or raw
  - Reduces glycation and inflammation
  - Protects against colon cancer
  - Enhance absorption of minerals

**Make Don't Take! – Antioxidants – Nrf2**

Oxidative stress is the damage to DNA, proteins, and fats caused by oxidants, or “free radicals”, which are highly reactive substances containing oxygen from excess production of oxidants. Oxidative stress is the result of inflammation, infections, and consumption of alcohol and cigarettes. By implementing these strategies for caring for our brains, especially exercising and cutting out sugar, you will be well on your way to reducing oxidative stress.

To help further, forget about consuming antioxidant rich food and supplements. Instead, reduce oxidative stress and damage by triggering Nrf2 (nuclear factor erythroid 2-related factor) to **generate your own antioxidants** by consuming coffee, cocoa, green tea, turmeric, resveratrol...what's in red wine, and pterostilbene found in blueberries. Consuming antioxidant supplements may be counter-productive as doing so may reduce your own ability to produce antioxidants.

And, eating your vegetables works differently than you might think. For example, while there are antioxidants in broccoli, there aren't enough from your diet to function as antioxidants. However, broccoli, kale and other cruciferous vegetables have a chemical called sulforaphane that activates stress response pathways in cells. For those with thyroid dysfunction, remember to cook broccoli or kale. Eating a variety of vegetables and fruits may be as important for giving you a variety of stresses as for giving you a variety of nutrients.

## **8. Meditation – Brain Training**

Meditation is active training of your brain to increase awareness. By learning how to meditate and meditating on a daily basis you will increase brain volume and connections between neurons while reducing negative brain activity. In addition to triggering BDNF, scientists have proven meditation:

- Decreases depression, pain and anxiety – as or more effective than medications
- Increases a feeling of wellbeing, mood, concentration, attention, focus and memory
- For those battling addictions, from opioids to sugar, you are able to ride out the cravings
- For those experiencing severe trauma, reprieve from painful and overwhelming thoughts
- Children especially benefit as their brains are still developing and the benefits build
- Experienced meditators have more grey matter and lose less as they age

There are different forms of meditation and you may find benefits from each, or you will learn and benefit from meditation incorporated into movement programs (e.g., yoga). From simple to learn, yet powerful Transcendental Meditation™, to clearing your mind with focused awareness meditation, to mindfulness training, practitioners are able to minimize cognitive decline as they age.

## **9. Power Fast – Combine with Exercise, Meditation, and Good Fats**

Occasional fasting is a very effective, yet easy way to switch your body and brain over to fueling yourself on fatty acids and ketones. The idea of occasional Power Fasting is to further generate ketones by combining your fast with moderate exercise, meditation, and consuming good fats such as coconut oil, MCT oil, or butter from grass-fed and grass-finished cattle. To reach a fast of 14-16 hours just takes skipping breakfast or dinner. If you skip dinner, just remember not to break your fast in the morning with carbohydrates!

If consuming more than just water and tea doesn't sound like a traditional fast, that is because this is a fast to help your body and brain switch fuel source from glucose to fatty acids and ketones. With a reduction in insulin, this frees up IDE (insulin-degrading enzyme) to focus on cleaning house.

### **Protecting Mom's Gift – Your Mighty Mitochondria**

Your mitochondria create energy stored as ATP (adenosine triphosphate) that delivers energy throughout the cell. As a byproduct, your 10 million billion mitochondria each produce hundreds to thousands of free radicals. Your mitochondria determine when a cell dies. Each day, ten billion cells are terminated to make way for healthier cells. Your mitochondria can be easily damaged by inflammation. When mitochondria become impaired, cellular suicide can occur in healthy cells.

Your mitochondria originated from bacteria that were once free-living that took up residency within our cells and provided our cells with the benefit of producing energy. They are a major part of your microbiome and their total weight is about 10% of your total weight.

All of your mitochondria DNA are from your Mom. To protect Mom's gift, there are lifestyle changes we can all make to increase growth of mitochondria – good fats including from coconut oil and fish oil, caloric restriction and occasional fasting, and of course, aerobic exercise.

### **10. Learn New Things, Play, Socialize, & Be Productive**

As you incorporate the other strategies from the list, you will be in a better frame of mind and better able to learn new things, play, socialize and be productive. Each of these, in turn, helps your brain. Learning new things helps to build and strengthen new connections between neurons. So, a beginning ballroom dancer actually gets more out of a class than an experienced ballroom dancer who just gets good exercise, has some fun, and socializes.

### **Addressing Alzheimer's Disease & Beyond – A Fuel Mix Shift – Dirty to Clean**

HOPE! If you or a loved one is already experiencing cognitive decline or diagnosed with MCI (mild cognitive impairment), Alzheimer's disease (AD) or other dementia, I implore you to aggressively pursue a low-carb, high good fat diet per the new book by Amy Berger, [The Alzheimer's ANTIDOTE](#). The brain of someone with AD can no longer effectively use glucose and needs to switch to also being able to use ketones for fuel.

If you implement my Top 10 strategies, you will be well on your way, with [The Alzheimer's ANTIDOTE](#) giving you the confidence of a specific, disciplined approach that works, and the justifications you may need to overcome misconceptions that perpetuate with physicians, other healthcare professionals, caregivers, and other family and friends.

Think of ketones as “clean” fuel such as wind or solar, and glucose as the “dirtiest” crude oil or coal. Heck with politics, this is your brain we're talking about – you want clean fuel. With a reduction in insulin, IDE (insulin degrading enzyme) that had to focus on clearing insulin can focus as well on clearing amyloid  $\beta$ -protein ( $A\beta$ ) that otherwise accumulates and forms plaques. You don't want that. Apparently, by clearing out the ravages of decades of damage, the brain can more efficiently use glucose. I liken that to shifting from coal and crude oil to natural gas.

While there is no guarantee, I am sure that success will only come from what Amy Berger teaches – by reducing insulin sufficiently that the brain begins to use ketones for fuel on a continuous basis. All other strategies, and, I expect, anything that eventually comes from pharmaceutical companies that actually helps, will build on top of this cornerstone.

Those people with the ApoE4 (apolipoprotein E) genotype are thought to have ancestors who evolved without grains and dairy and these people need to focus on monounsaturated fats and Omega-3 polyunsaturated fats, while minimizing saturated fats. For example, monounsaturated olive oil and MCT oil (medium chain triglyceride) extracted from coconut oil rather than coconut oil. Don't get frustrated by all this ApoE stuff – these are just molecules that help LDL (low density lipoprotein) get cholesterol where it needs to go.

Thanks to Amy Berger's book, we can now share HOPE! I've changed from teaching what to try, to what works. Even for those yet to experience symptoms of cognitive decline, adopting as much as possible will better prepare present and future elders.

Amy Berger doesn't recommend that everyone needs to adopt a ketogenic diet, though if you are caring for a loved one with MCI or AD, being a “diet buddy” will prove helpful, and many other serious conditions will benefit as well, including those with heart disease, Type 1 or 2 diabetes, obesity, chronic fatigue, GERD (gastroesophageal reflux disease) and bipolar disorder.

**Future Elders**

For future elders who we call children, we need to lead changes that will prevent earlier onset of Alzheimer's disease and other maladies that are the result of decades of assault to the gut and brain from processed carbs, bad oils, gluten, and glyphosate.

Consider that the guts and brains of Baby Boomers and older were developed before the hybridization of wheat, mass use of high fructose corn syrup, GMOs to withstand herbicides, proliferation of antibiotic prescribing, and births by C-Section heading toward half of all births. Boomers were raised, however, around when Ike had his heart attack and we switched from eating healthy animal fats to mass quantities of sugar, including OJ for breakfast.

The concern being that without major changes to diet and lifestyle, the rates of Alzheimer's, obesity, diabetes and more that we see today are minor to what we will see. While Boomers are notably in worse shape than our parents, the trajectory is worse for our children and grandchildren as we've stacked the deck against them. Please consult your physician before beginning exercise, changing any medications, or taking supplements. But begin you must!

**RECOGNIZE A STROKE - STRS****S**MILE    **T**ALK    **R**AISE YOUR ARMS    **S**TICK OUT YOUR TONGUE

Learn how to recognize the signs of a stroke. Ask the person to smile, to speak a SIMPLE sentence (e.g., say "chicken soup"), raise BOTH arms and stick out their tongue. If their smile or tongue is crooked, their voice stumbles or they have trouble raising their arms – **CALL 911**

**Reading List**

Brain Maker, David Perlmutter, MD

Spark, John J. Ratey, MD

The Alzheimer's ANTIDOTE, Amy Berger, MS, CNS, NTP (forward by Dr. Perlmutter)

The Thyroid Connection, Amy Myers, M.D.

The Ultramind Solution, Mark Hyman, M.D.

The 21-Day Belly Fix, Tasneem Bhatia, M.D.

**About John Carroll**

I am not a scientist, physician, or librarian, though I've worked well with all. Unfortunately, I am a far too experienced caregiver. In the 1980's, I led efforts creating innovations in senior housing and quality of care. 25 or so years ago, when colleague Dr. Jack Lord brought together 25 leaders in healthcare, I was the sole voice for geriatric care.

After learning and teaching what helped at the end of life, I turned to future elders who we call children who were and are in greater need and by helping will have a lifetime of improved life. Earlier this century, teaming with Dr. Paul Kurtin, I helped bring together the pediatric community to improve quality of care in pediatric hospitals.

Upon learning of my earlier work serving The Greatest Generation, my partner Don Deans and colleague Matt Tarkenton challenged me to update what I was teaching years ago and compare and contrast the aging of the Greatest Generation with us Baby Boomers and those who follow. . Aging and Your Mind is the first in a series of presentations.