KEEPING YOUR MIND SHARP!
ALZHEIMER'S, MEMORY LOSS AND DEMENTIA.

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Her absence initially sounded no alarm; everyone thought she was with someone else. But as twilight fell, and Mrs. Parker did not show up, fears mounted. Six weeks of intensive searching and national news coverage failed to locate the missing retiree. What had happened? Plagued with the failing memory and disorientation of advancing Alzheimer's, Mrs. Parker had wondered off, not to be discovered till 6 months later, 13 miles (20 km) from home where she had been overcome with exposure.

What is dementia? It is a progressive decline in brain function, brain failure if you please, loss of memory, intellect, rationality, social skills, and physical functioning. It is an illness that can happen to anybody, but it is more common as one gets older. Statistically it is more common after age 65, at which age as many as one in ten people come down with it. By 85 years of age fully one in three individuals will meet the criteria.[1] Sixty percent of people have personal fear of developing Alzheimer's.[2]

Don't wait till you have all the signs of Alzheimer's before deciding to do something positive for your future mental health.

The most common types of dementia are Alzheimer's disease, vascular dementia, dementia with Lewy bodies, frontotemporal Lobar Degeneration, Huntington's disease, alcohol related dementia (Korsakoff's syndrome) and Creutzfeldt-Jacob disease (mad cow disease in humans).[3] For our purposes, to keep things simple, and to focus largely on the predominant form, Alzheimer's, I will refer collectively to these diseases with the words Alzheimer's and/or dementia.

Who gets dementia? In Australia, dementia is the second leading cause of death, superseded only by heart disease.[4] For women it is the leading cause of death, surpassing even breast cancer, lung cancer, heart disease and stroke.

What happens to a person's brain in Alzheimer's Disease? Two distinctive findings in the brains of patients with Alzheimer's disease confirm the diagnosis and contribute to its disease process. The first is the appearance and accumulation of a degenerate protein named amyloid into formations called plaques found between the brain cells. The second is the appearance of twisted mats of fibers within the brain cells themselves called neurofibrillary tangles which are made up of a protein called tau.[5] So when we talk of lifestyle practices that increase Amyloid or neurofibrillary tangles, you know we are talking about things that increase Alzheimer's or dementia.

Alzheimer's disease typically progresses slowly in three general stages — mild (early-stage), moderate (middle-stage), and severe (late-stage).[6] Alzheimer's disease typically progresses slowly. Different people progress at different rates. Most die within 4-8 years of its onset.[7]

How could a person determine if they were coming down with dementia or Alzheimer's? There are ten well accepted signs to consider:[8]

1. Memory loss that disrupts daily life.
2. Challenges in planning or solving problems.
3. Difficulty completing familiar tasks at home, at work or at leisure.
4. Confusion with time or place.
5. Trouble understanding visual images and spatial relationships.
6. New problems with words in speaking or writing.
7. Misplacing things and losing the ability to retrace steps.
8. Decreased or poor judgment.
9. Withdrawal from work or social activities.
10. Changes in mood and personality.

At this point, how many feel like they are doomed to dementia? As you reviewed this list, did you find yourself feeling uncomfortable as some of the signs struck close to home? Don't wait till you have all the signs of Alzheimer's before deciding to do something positive for your future mental health. Would you like to

know what causes dementia and what you can do to avoid or even reverse it?

So, what causes Alzheimer's and dementia? Topping the list of lifestyle practices you need to avoid if you want to keep your mind sharp and avoid Alzheimer's is overeating. And why overeating? Overeating decreases your brain's blood flow[9] and oxygen while increasing its inflammation[10] and its Alzheimer's β-amyloid protein.[11]

On the other hand, Okinawans, as a group of people, are less likely to get Dementia. Any idea why? One very important reason is that they eat, on average 40% fewer calories.[12] Indeed, caloric restriction and intermittent fasting has been shown to significantly reduce your risk of Alzheimer's.[13] And why is eating less so helpful? One way it helps is that it increases your key antioxidant defense enzymes.[14] Additionally it Increases your brain-derived neurotrophic factor (BDNF), a molecule which helps your brain to grow and stay young. Caloric restriction also stimulates the growth of new neurons from stem cells.[15]

One practical way to practice caloric restriction is to eat only two meals a day, well-spaced apart, instead of three.[16] This means no snacking. Don't eat between meals; the pleasure of doing so will eventually be forgotten. If you maintain a regular meal schedule[17,18] of two or three daily meals with no snacking between, it has an anti-aging effect on your brain.

With overeating having such a detrimental effect on brain health, would it be of any surprise to you to discover that obesity is a huge risk factor for dementia? Indeed, being overweight increases your risk of Alzheimer's by 60%.[19] Obesity, when combined, as it often is, with diabetes, quadruples the risk of Dementia.[20]

Can you think of some ways in which you could make eating fewer calories palatable and satisfying while maintaining the health of your brain?

Not that we want you to stop eating all together, that is not the goal. That said, some foods are beneficial for your brain while others are not. Meat is particularly hazardous to long term mental abilities due to its negative impact on brain inflammation.[21,22,23] This holds true also of a diet overly rich in fats, as fatty foods, fried foods, and cooking oils. For this reason, fried foods, especially fried meats, are best left off the Alzheimer's prevention diet. This holds true for high or "full" fat dairy products as well.[24]

Not all fats are created equal. Some fats pose a greater danger than others. Saturated fats and trans-fats in your diet accelerate cognitive deterioration and are associated with cognitive decline among older persons.[25]

Inflammation is a danger to one's brain. One mechanism by which diet contributes to decline in mental functioning is its contribution to inflammation in the brain.[26] Inflammation is increased by fermented foods because fermentation generates aflatoxins, and aflatoxins weaken your memory.[27] Examples of fermented foods include: cheese, vinegar, alcohol, soy sauce, chocolate, coffee, vanilla, brown rice syrup, etc. Eating fresh food is much preferable to old, aged, spoiled foods.

Sugar is hazardous to brain longevity. Any food that would give a diabetic high blood sugar, such as refined carbohydrates and sugar, will increase your risk of dementia.[28,29] Sugar clogs the system and decreases your memory function.[30] Add milk and it gets even worse. Higher intakes of dairy desserts and ice-cream cause even more rapid cognitive decline.[31]

What happens if you feed normally vegetarian animals dietary cholesterol? For rabbits, this spells Alzheimer's changes in their brains, no carnivore rabbits![32] Meat eaters suffer three time the risk of dementia as vegetarians. And why is that? A recent study links up to 13% of all "Alzheimer's" victims as really having Creutzfeldt-Jakob disease or mad cow disease. Which brings up the unthinkable: that Alzheimer's, Creutzfeldt-Jackob, and Mad Cow Disease might just be caused by eating contaminated meat or dairy.[33]

At this point, let me pause to let you take a moment to think back over your life and all the food you have eaten, and consider; have your dietary choices been nurturing to brain health or have they tended toward brain degeneration? What can you do at this point to improve your long-term chances of avoiding Alzheimer's?

Believe it or not, brain health is closely connected with colon health. Why? Microbes in your digestive tract affect the health of your brain through molecules they release into your blood circulation. The diet you choose profoundly affects the bacteria that can survive in your gut. The brain suffers when the wrong diet favours the harmful bacteria.[34] The western diet supports an intestinal bacterial population (or "microbiome," as it has come to be called) that increases the risk of dementia.[35]

Mono Sodium Glutamate (MSG) increases Alzheimer's degenerative changes in your brain. Where do you find MSG?

Gut bacteria are not the only microbes that impact your mental status. There are many microorganisms – some good and some not so

good – that are capable of having a telling influence on the long-term wellbeing of your brain. Dangerous microorganisms are frequently associated with degeneration, decay, fermentation, spoilage, the rotting process, aging and infections. For example, if your home has experienced water damage, molds and mycotoxins will be present which will in turn compromise your mental functioning.[36] By the same token, letting the same organisms responsible for the deterioration of your living quarters live in your food can have the same dangerous effect. At this point the important question to be asked is, do any of my foods contain mycotoxins, such as aflatoxin? A little research will reveal what commonly eaten foods have fermentation as part of their processing. Some common ones include wine, vinegar, cheese, yogurt, sauerkraut, soy sauce, brown rice syrup, miso, Tempe, coffee, black tea, vanilla, yeast, mushrooms, salami, etc. Fermentation is not a way to make your food better, but to introduce into it the toxic waste products of microorganisms.[37,38] Some foods, because of their storage or harvesting conditions are more likely to contain aflatoxins, one such example is peanuts and peanut butter.[39]

Mono Sodium Glutamate (MSG) increases Alzheimer's degenerative changes in your brain. How do you give laboratory rats Alzheimer's so that you can study them? One common technique is to put MSG in their food.[40] How do you give people Alzheimer's? MSG increases both amyloid[41] and tau[42] Alzheimer's proteins in the brain leading to plaque formation and neurofibrillary tangles. Read your labels! Where do you find MSG? It is hidden under a lot of names in foods, and a lot of ingredients harbour high levels of it: Soy sauce,[43] hydrolysed vegetable protein, sodium caseinate, textured protein, autolyzed yeast, yeast extract, natural flavours #621, gelatin, seasonings, carrageenan, just to name a few. If your food is processed, fermented, or has food additives in it there is a high likelihood it contains hidden MSG.

Pickles with their vinegar and high nitrates increase your risk of dementia.[44]

Certain food combinations challenge our health and increase the risk for brain deterioration, for example large varieties at any one meal, especially if they contain a mixture of fruits and vegetables at the same sitting. Complex meals with a high variety of food items or dishes confuse your stomach, slow your digestion, and increase brain inflammation, laying the groundwork for dementia.[45]

Avoid caffeine brain![46] Caffeine decreases mental performance.[47,48] It really does not improve alertness, but merely returns the addict to baseline.[49] What's more, it disturbs sleep[50] and reduces the Alzheimer's preventing[51] hormone melatonin.[52]

Smoking is not helpful either, it increases your risk of Alzheimer's by 60%.[53]

Drinking a glass of red wine, a day for your heart?[54] Alcohol causes loss of important neurons and increases Alzheimer's changes in your brain. In Alzheimer disease, the tau protein is aggregated into bundles of filaments referred to as neurofibrillary tangles. Drinking alcohol is associated with increased tau neurofibrillary tangle accumulation.[55]

Striking closer to home, both hypersexuality[56] and masturbation[57] increase your risk of Alzheimer's by depleting of the dementia-preventing mineral zinc.[58,59]

Neurotoxic herbicides, like glyphosate (brand name RoundUp and others), cause oxidative damage to your brain and increase the likelihood of dementia.[60,61,62] Glyphosate can certainly be in any agricultural products, but especially be careful of grains, beans, cotton, contaminated air, fruits and vegetables, and your drinking water. Danger of Alzheimer's is not limited to herbicides; exposure to pesticide residues increase your risk of dementia by 34%.[63] Pesticides are commonly found in commercially grown foods, drinking water, contaminated air, and dust. "Beef is the most dangerous food for herbicide contamination and ranks third in insecticide contamination."[64]

Chemicals toxic to your brain, like formaldehyde, are often found in household building materials, synthetic clothing, and many medications.[65,66]

Arsenic in your diet compromises your brain's function and significantly increases your risk of Alzheimer's.[67] Sources of exposure to arsenic include chicken,[68] eggs,[69] food grown in chicken litter,[70] fish, sea food,[71] yogurt,[72] bottled water,[73] some rice, sugars, and sweeteners.[74]

I think I have shared most of the bad news first, and now I will share some good news. There is hope! Your brain runs and thrives on good nutrients.

Due to media coverage, popular opinion, and the press, it is no secret that aluminum plays a significant role in the development of Alzheimer's dementia. Indeed, laboratory animals fed aluminum, accumulate aluminum in their brains and experience cognitive deterioration.[75] Aluminum can cause accumulation of Alzheimer's neurofibrillary tangles in your brain.[76] Sources of aluminum for humans include cheese,[77] baking powder:

pancake and waffle mixes, biscuits, cakes, cookware, tea, drinking water, vaccinations, geoengineering,[78] antacids, chocolate, non-dairy creamers, salt, and toothpaste.[79,80]

As if aluminum were not bad enough by its self, combine it with fluoride and the result is even more dramatic.[81] Indeed, fluoride and aluminum are also used to produce Alzheimer's in laboratory animals.[82] Common sources of fluoride include: tea,[83] toothpaste, drinking water,[84] salt,[85] non-stick cookware,[86] pesticides, fertilizers[87] and medications.[88]

Heavy metals can also play a role in Alzheimer's. Mercury and bromide levels are higher in Alzheimer's patients.[89] Mercury can be from: processed foods,[90] dental fillings,[91] vaccines,[92,93] fish,[94] medications,[95] mushrooms[96] and Corn sweeteners.[97] Bromine can be from: fire retardants,[98] food preservatives, fumigants,[99] pesticides,[100] fish,[101] dough conditioners in bread,[102] plastics,[103] Soft drinks,[104] vegetable oils, and swimming pool treatments.[105] One of the reasons bromine and fluoride increase the likelihood of getting Alzheimer's is their competitiveness with iodine. Iodine deficiency plays a role in Alzheimer's and Parkinson's diseases.[106] Supplementing with Iodine can have its benefits if you are deficient.

Many of the drug medications people take increase the risk of dementia. For example, statins (cholesterol lowering medications), diuretics (used for high blood pressure and edema),[107] proton pump inhibitors (drugs for heartburn and reflux disease),[108] and anti-inflammatory drugs (pain relievers for arthritis and other pains),[109] anticholinergic drugs (antipsychotics for mental disorders),[110] etc., all significantly increase the risk for dementia or make its symptoms worse. Being put to sleep for surgery can cause brain fog and increase your risk of dementia.[111]

I think I have shared most of the bad news first, and now I will share some good news. There is hope. Your brain runs and thrives on good nutrients. To protect your brain from deterioration, you need to eat more nutrient dense fresh fruits and vegetables.[112] It is simple, just increase the percentage and variety of fruits and vegetables in your diet.[113] The increased consumption of fruit and vegetables is associated with a reduced risk of cognitive impairment and dementia.[114] Variety more than total quantity of fruits and vegetables helps protect cognitive function.[115]

"But I don't like eating salads and veggies." you may be thinking, "Can I just juice them or blend them into smoothies and just quickly drink them?" With such glamorous article titles as, "Juice your way to fabulous health?" appearing in print, you may be thinking that this is the way to get your best nutrition, but not so according to scientific research. People who drink juice every day have lower brain volumes and poorer memories.[116]

And why are fresh fruits and vegetables so helpful? It is because they are richer in vitamins. Vitamins give life to your brain, and you can just eat them in your food. Vitamin A protects against dementia and can be obtained from sweet potato, carrots, kale, spinach.[117] B vitamins, protect against Alzheimer's disease and are found in grains, seeds, beans, nuts, greens. The earliest and perhaps best example of an interaction between nutrition and dementia is related to thiamine (vitamin B1). Throughout the last century, research showed that thiamine deficiency is associated with neurological problems, including cognitive deficits and encephalopathy.[118] Evidence supports the role for riboflavin (vitamin B2) in slowing the progression of cognitive decline.[119] Higher intake of B vitamins: niacin (B3), pyridoxine (B6), folate (B9), and cobalamin (B12) throughout young adulthood was associated with better cognitive function in midlife.[120] Vitamin C, lowers the risk of dementia and can be obtained from capsicum (bell peppers), kiwi, red cabbage, and citrus.[121] Vitamin D deficiency doubles the risk of Alzheimer's. The best source is actually not from the diet but from sunlight. If your serum 25(OH)D level is below 10 ng/mL you are more than twice as likely to develop Alzheimer's disease than if it is greater than 20 ng/mL.[122] Vitamin E helps maintain better brain nutrition. Good sources include sunflower seeds, almonds, and flax.[123] Vitamin K deficiency is associated with Alzheimer's. Best foods sources of Vitamin K are dark green leafy vegetables, onions, and peppers.[124] If you are on a plant-based diet your intake of antioxidants is significantly greater than that of meat eaters. For example, your intake of vitamin C is 305% higher than the recommended, vitamin A intake is 247% higher, and vitamin E 313% higher.[125] There are a lot of delicious foods in the plant kingdom high in nutrients designed to be of benefit to your brain.

Vegetables are highly nutritious. Cruciferous and green leafy vegetables can slow cognitive decline and lower your risk of dementia as you get older.[126] Cruciferous vegetable intake has been demonstrated to slow the progress of cognitive decline.[127] Consumption of as little as one serving per day of green leafy vegetables can slow cognitive decline as you age. According to one study, daily green leafy veggie consumption keeps your brain an equivalent of 11 years younger.[128]

Fruit is highly nutrient dense. Compared to eating less than one piece of fruit per day, consuming 2 to 3 pieces daily can reduce Alzheimer's mortality by 40% and eating more than 3 pieces per day have been shown to reduce it by 60%.[129]

Berries are particularly nutrient dense and high in antioxidants making them very desirable for both reversing and preventing dementia.[130] Blueberries help counteract the brain-damaging effects of a high fat diet.[131] Cranberries can prevent the toxic effects of amyloid in Alzheimer's disease.[132] Red raspberries exhibit health-promoting properties which have critical metabolic, oxidative, and anti-inflammatory links to preventing Alzheimer's disease.[133] Mulberries can be a natural cognitive enhancer and neuroprotectant.[134] Strawberries (best eaten organic to avoid chemicals) have been shown to reverse age-related losses in motor and cognitive performance.[135] Blackberries improve age related deterioration of motor and cognitive performance.[136] Goji berries protect against neuronal injury and loss caused by β-amyloid peptide, and glutamate excitotoxicity.[137] Grapes help maintain brain metabolism and cognitive function in patients with mild decline in thinking ability.[138] Tomatoes, with their lycopene, help to protect against Alzheimer's-induced cognitive dysfunction.[139] Higher serum levels of lycopene are associated with a lower risk of Alzheimer's mortality in adults.[140] Eat all the berries you can get your hands on!

Other fruits are also helpful. Pomegranate consumption has been shown to significantly improve memory and brain function.[141] Apples have been shown to return brain function to younger levels.[142] Plums have been shown to improved working memory, mitigating against age-related declines in brain function.[143] Citrus has been shown to be a valuable weapon against Alzheimer's dementia.[144] Peppers (capsicum, which is a fruit not a vegetable) have been shown to inhibit the formation of Alzheimer's amyloid in the brain.[145] Many fruits are helpful event though they have not all have been specifically studied; fruit of any kind can be beneficial, get as much as you can.

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Olives are high in antioxidants that prevent neurodegenerative diseases and are associated with reduced risk of mild cognitive impairment and Alzheimer's disease.[146,147] Olives have been shown to prevent neurofibrillary tangles from tau fibrillization.[148]

Whole grains, in distinction to refined processed grains, have antioxidant activity and minerals which protect your brain against Alzheimer's.[149]

Higher consumption of whole legumes (beans) decreases cognitive decline as you get older.[150]

Raw nut consumption helps dementia because it reduces blood pressure, improves blood sugar regulation, improves vascular function, reduces inflammation, and also improves cognitive performance.[151] Eating nuts can delay cognitive decline in old age.[152,153] Walnuts are of particular interest because they have been demonstrated to improve scores on brain function tests.[154] Polyphenolic compounds found in walnuts not only reduce the oxidant and inflammatory load on brain cells but also improve intraneuronal signaling, increase neurogenesis, and help the brain deal with neurofibrillary tangles.[155] Hazelnuts improve memory, reduce anxiety-related behavior, and have an ameliorating effect on the toxic nature of amyloid.[156] Brazil nuts with their relatively high selenium content help with cognitive impairment.[157,158] Almonds, along with some of the other nuts, provide macronutrients, micronutrients, and phytochemicals that affect several pathways in Alzheimer's pathogenesis such as amyloid and tau protein dysfunction, and oxidative stress; additionally they lower cholesterol, reduce inflammation, and promote neurogenesis.[159]

Seeds, like nuts, have many nutrients which can positively impact brain performance. Flax seed (linseed) has been shown to improve mental performance.[160] Sesame seeds protect against Alzheimer's amyloid toxicity.[161] Sunflower seeds are anti-Alzheimer's because they are high in healthy phospholipids.[162]

Do you have some areas of food choices where you could make more positive selections to better prevent and lower your risk of Alzheimer's?

Did you know that herbs can help you fight Alzheimer's disease? "He causeth the grass to grow for the cattle, and herb for the service of man: that he may bring forth food out of the earth;"[163] Red clover: (Trifolium pratense) protects neurons from glutamate (MSG) damage.[164] Gotu Kola: nullifies aluminum toxicity[165] and decreases amyloid levels.[166] Panax ginseng: significantly improves frontal lobe function in Alzheimer's.[167] Ginkgo biloba: helps mild to moderate Alzheimer's dementia.[168] Huperzia serrata: produces cognitive enhancement and improves memory.[169] Salvia officinalis, (Sage) improves cognitive function in

Alzheimer's.[170] Horsetail: contains silica which reduces dementia and Alzheimer's.[171] Turmeric, inhibits amyloid-β plaque formation, binds copper, lowers cholesterol, and is an antioxidant.[172] Brahmi (Bacopa monnieri) reduces neuroinflammation, inhibitions Amyloid-β aggregation and improves cognitive function and learning.[173],[174] Ashwagandha (Withania somnifera) has the potential to reverse behavioral deficits, plaque pathology, and accumulation of β-amyloid peptides (Aβ) in the brain.[175] So pick a few of these herbs and make yourself a nice cup of unforgettable tea.

Essential oil from Japanese Hinoki Cypress trees can prevent neuronal cell death in Alzheimer's.[176]

Have you drunk your water today? Good hydration improves your memory and intelligence reducing your risk of Dementia.[177] Start the day off with a liter (quart) of water. Men need 3.7 liters (quarts) a day and women need 2.7 liters (quarts) a day.[178] Hydrotherapy can also prevent and treat dementia.[179] A cool morning sponge bath stimulates your nerves. Hot and cold showers are invigorating to your brain's circulation. A hot foot bath can improve mental status. Hot and cold treatments to the head can improve your brain blood supply and oxygenation. Sauna bathing can reduce your risk of Alzheimer's.[180]

Every hour you spend per day in media entertainment (TV, YouTube, video games, computer time, mobile device, smart phone) increases your risk of Alzheimer's by 30%.

The risk of dementia increases with either too little or with too much sleep. Regularity in bedtime improves your memory. Best time for sleep: 9pm to 5am. Sleeping pills increase your risk of dementia 66%.[181] It is during good sleep that plaques are removed from your brain.[182,183] Especially deleterious is the consumption of a large evening meal. It compromises sleep which increase Alzheimer's.[184,185] It also increases the bodies core temperature at night which also increases Alzheimer's.[186,187] If any food is eaten at all in the evening, the meal should be at the same time every day, be at least 3 hours before bedtime, be at least 5 hours after lunch and should consist only of fruit and possibly a small serving of some whole grain product. Avoid vegetables, animal products, fats and hard to digest foods in the evening. Reading late in the evening or watching TV also disrupts sleep increasing the risk of Alzheimer's.[188] Good sleep is associated with good melatonin levels. Alzheimer's risk rises when your melatonin levels fall. Melatonin levels fall with late bedtimes, after 9:30pm, artificial lighting after sundown, blue/white light in the evening (like from TV, computers or mobile phones, night lights, illuminated clocks), irregular eating and sleeping schedules, and shift work.[189,190]

Indeed, media entertainment in general has a negative impact on healthy cognitive function. Every hour you spend per day in media entertainment (TV, YouTube, video games, computer time, mobile device, smart phone) increases your risk of Alzheimer's by 30%.[191],[192]

With the electronic age and media entertainment also comes the hazard of electromagnetic fields. Electromagnetic Fields (EMF) increase your risk of Alzheimer's.[193] Electromagnetic fields can come from mobile phones and cordless phones (especially DECT), Wi-Fi and computers, smart meters, radio towers, electronic devices, and high-power lines.[194,195]

There is some entertainment that can be beneficial. Listening to, singing,[196] or playing[197] good music can improve your memory, mood and thinking. Putting things you need to memorize to music is also an effective way to improve memory in Alzheimer's.[198]

Music is often associated with reflection or meditation. Meditation relieves stress, increases brain blood flow and your brain volume, and it reduces your risk of cognitive decline.[199,200] "O how love I thy law! it is my meditation all the day."[201]

Regular physical activity sharpens the brain, improves memory and thinking skills, and helps prevent Alzheimer's.[202] In fact, exercise can be more effective than diet control in preventing amyloid deposition and memory deficits.[203] Moderate intensity aerobic exercise can improve cognitive function in patients with mild Alzheimer's disease. Those who are more active can improve their brain function by 32-39%.[204] Best exercise times are before breakfast and after each meal. The best exercise you can engage in is walking. Walking improves brain function,[205] increases memory,[206] and reduces risk of dementia.[207] The best place to exercise is out in nature, away from the busyness of the city with its noise and pollution. Pure air is beneficial while air pollution increases Alzheimer's brain changes.[208] Improved ventilation with outdoor air improves mental performance.[209,210] A healthy life style, with daily outdoor activity, reduces your risk of dementia.[211] Physical exercise in a natural outdoor environment lowers your risk of Alzheimer's by its positive effects on blood pressure and inflammation.[212,213,214] The natural environment

also includes sunshine. Countries with lower average sunlight have higher Alzheimer's death rates.[215] Morning sunlight helps depression. Afternoon sunlight increases vitamin D.[216]

Combined physical and mental exercise improves your mental performance more compared to physical exercise alone.[217,218]

Having a purpose and doing things purposefully with your whole heart protects your neurons.[219] In fact, a person with purpose is 2.4 times more likely to remain free of Alzheimer's.[220] Daydreaming has negative effects increasing your risk of Alzheimer's. "Whatsoever thy hand findeth to do, do it with thy might; for there is no work, nor device, nor knowledge, nor wisdom, in the grave, whither thou goest."[221]

The name of the game is purposeful physical activity that engages the intellect as well as your muscles. What activities are available to you that could stimulate both your brain and your body?

Make friends! Having 5-6 close friends decreases your risk of cognitive decline by 250%. People with more friends were found to have better cognitive function and lower rates of Alzheimer's.

Have you heard it said, "Use it or lose it?" This is definitely true of your brain and risk of Alzheimer's. If you engage in more active thinking over your lifetime, your chances of having amyloid deposit in your brain are greatly diminished.[222] Do things that keep your brain active: keep your own accounts, form your own opinions, make long-term plans, learn new skills, and improve old ones, take up a new hobby. Keep learning your whole life; it prevents dementia.[223,224] Learning stimulates growth of brain networks which bypass damaged areas in your brain.[225] Maintaining a high level of mental activity reduces your risk of dementia by 66%.[226] Stimulating mental activities might include: reading, discussing, studying, word games, etc. Bible Study is the best mind builder. It is good to fill your leisure time with mind-engaging meaningful activities.[227] An idle mind is a brain in decline.

Independent thinking and acting maintains better brain function.[228] Relying on others is nice, but as much as possible, do all your own thinking, planning, and analyzing.

Memory exercises pay off in helping to maintain and revitalize your memory.[229,230] Help your memory by use of object lessons, blackboards, maps, figures, symbols, mnemonics, and pictures.

What strategies have you formulated to stimulate and maintain your memory abilities as you get older?

A joyful heart is good medicine, and a positive attitude predicts fewer memory problems.[231] Happiness improves your memory.[232] As your happiness fluctuates from day to day so does your memory.[233] "A merry heart doeth good like a medicine: but a broken spirit drieth the bones."[234]

Psychological stress predicts the progression to dementia.[235] Psychological distress and depression, anxiety and apathy can be present in mild cognitive impairment and can predict progression to dementia. Chronic stress is a risk factor for Alzheimer's.[236] If you are a person who is prone to stress, then you have a greater chance of coming down with Alzheimer's.[237] Guilt brings the ultimate stress. Depression,[238] anxiety,[239] dread, loneliness,[240] and poor self-esteem[241] can all give you Alzheimer's. Take life one day at a time.

Stress is about your emotions. What we are talking about here is having good emotional health to escape Alzheimer's. The fruits of the Spirit are a good list of positive emotions worth cultivating in prevention of dementia. "But the fruit of the Spirit is love, joy, peace, patience, kindness, goodness, faithfulness, gentleness and self-control."[242]

Christianity has been shown to reduce your risk of Alzheimer's by 50%.[243] Regular church attendance reduces the incidence of dementia.[244] Your brain benefits from the personal and group Bible study, prayer, meditation, and memorisation available in the setting of a church. Christianity offers stress reduction, mental quietude and acquiescence—complete confidence in God to work out all difficulties satisfactorily. Bible study, comparing text with text, is a real workout for your brain's association cortex. And true Christianity leads you to live to help others. Selflessness in volunteering has been shown to preserve your intellectual capacity.[245] Volunteers had 78% less intellectual decline over a one-year period compared to non-volunteers.

Make friends! Having 5-6 close friends decreases your risk of cognitive decline by 250%.[246] People with more friends were found to have better cognitive function and lower rates of Alzheimer's.[247]

What we are talking about here is social health as a benefit to long term cognitive functioning. One way to improve your social health is to practice the one another texts. Love one another (John 13:34,35). Accept one another (Romans 15:7). Pray for one another (James 5:17). Honor one another (Romans 12:10). Encourage one

another (1Theselonians 5:11). Carry one another's burdens (Galatians 6:2). Serve one another (Galatians 5:13). These all have practical potential to increase brain activity and stave off dementia.

Given the high impact of stress and negative emotions on brain health, I want to ask an important question. Do you have inner peace?

> "In the heart of Christ, where reigned perfect harmony with God, there was perfect peace. He was never elated by applause, nor dejected by censure or disappointment. Amid the greatest opposition and the most cruel treatment, He was still of good courage. But many who profess to be His followers have an anxious, troubled heart, because they are afraid to trust themselves with God. They do not make a complete surrender to Him; for they shrink from the consequences that such a surrender may involve. Unless they do make this surrender, they cannot find peace."
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> "It is the love of self that brings unrest. When we are born from above, the same mind will be in us that was in Jesus, the mind that led Him to humble Himself that we might be saved. Then we shall not be seeking the highest place. We shall desire to sit at the feet of Jesus and learn of Him. We shall understand that the value of our work does not consist in making a show and noise in the world, and in being active and zealous in our own strength. The value of our work is in proportion to the impartation of the Holy Spirit. Trust in God brings holier qualities of mind, so that in patience we may possess our souls."
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> "The yoke is placed upon the oxen to aid them in drawing the load, to lighten the burden. So with the yoke of Christ. When our will is swallowed up in the will of God, and we use His gifts to bless others, we shall find life's burden light. He who walks in the way of God's commandments is walking in company with Christ, and in His love the heart is at rest. When Moses prayed, 'Show me now Thy way, that I may know Thee,' the Lord answered him, 'My presence shall go with thee, and I will give thee rest.' And through the prophets the message was given, 'Thus saith the Lord, Stand ye in the ways, and see, and ask for the old paths, where is the good way, and walk therein, and ye shall find rest for your souls.' Exodus 33:13, 14; Jeremiah 6:16. And He says, 'O that thou hadst hearkened to My commandments! then had thy peace been as a river, and thy righteousness as the waves of the sea.' Isaiah 48:18."
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> "Those who take Christ at His word, and surrender their souls to His keeping, their lives to His ordering, will find peace and quietude. Nothing of the world can make them sad when Jesus makes them glad by His presence. In perfect acquiescence there is perfect rest. The Lord says, 'Thou wilt keep him in perfect peace, whose mind is stayed on Thee: because he trusteth in Thee.' Isaiah 26:3. Our lives may seem a tangle; but as we commit ourselves to the wise Master Worker, He will bring out the pattern of life and character that will be to His own glory. And that character which expresses the glory—character—of Christ will be received into the Paradise of God. A renovated race shall walk with Him in white, for they are worthy."
>
> "As through Jesus we enter into rest, heaven begins here. We respond to His invitation, Come, learn of Me, and in thus coming we begin the life eternal. Heaven is a ceaseless approaching to God through Christ. The longer we are in the heaven of bliss, the more and still more of glory will be opened to us; and the more we know of God, the more intense will be our happiness. As we walk with Jesus in this life, we may be filled with His love, satisfied with His presence. All that human nature can bear, we may receive here. But what is this compared with the hereafter? There 'are they before the throne of God, and serve Him day and night in His temple: and He that sitteth on the throne shall dwell among them. They shall hunger no more, neither thirst anymore; neither shall the sun light on them, nor any heat. For the Lamb which is in the midst of the throne shall feed them and shall lead them unto living fountains of waters: and God shall wipe away all tears from their eyes.' Revelation 7:15-17."[248]

SUMMARY

Alzheimer's, dementia, and memory failure are increasing alarmingly and are at an all-time high. Why? Your brain is under attack from poor lifestyle habits, environmental insults, and psychological stress. Your solution is to eat well, live well, and think well.

Recommendations:

- Eat plenty of fresh fruits and vegetables, whole grains, legumes, nuts and seeds, but don't overeat.
- Limit or avoid animal products, fatty foods (including oils), fermented foods, processed foods and chemicalized foods.
- Eat only at scheduled mealtimes and eat very little if anything in the evening.
- Take time daily for vigorous exercise in the great outdoors in the fresh air, sunshine and in as natural an environment as possible. Useful purposeful labor is the very best.
- Drink plenty of fresh pure water.
- Avoid heavy metals, chemicals, pesticides, MSG, and herbicides.
- Keep your mind active and challenged every day.
- Make friends and build social networks.
- Take steps to manage stress effectively.
- Take advantage of the help God can give you in living to the fullest free from stress and worry.

For further ideas on how to incorporate what you have just learned into your daily life, see the chapter entitled, "How Can I Apply Healthy Principles in My Daily Life". Or Lifestyles Choices.

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